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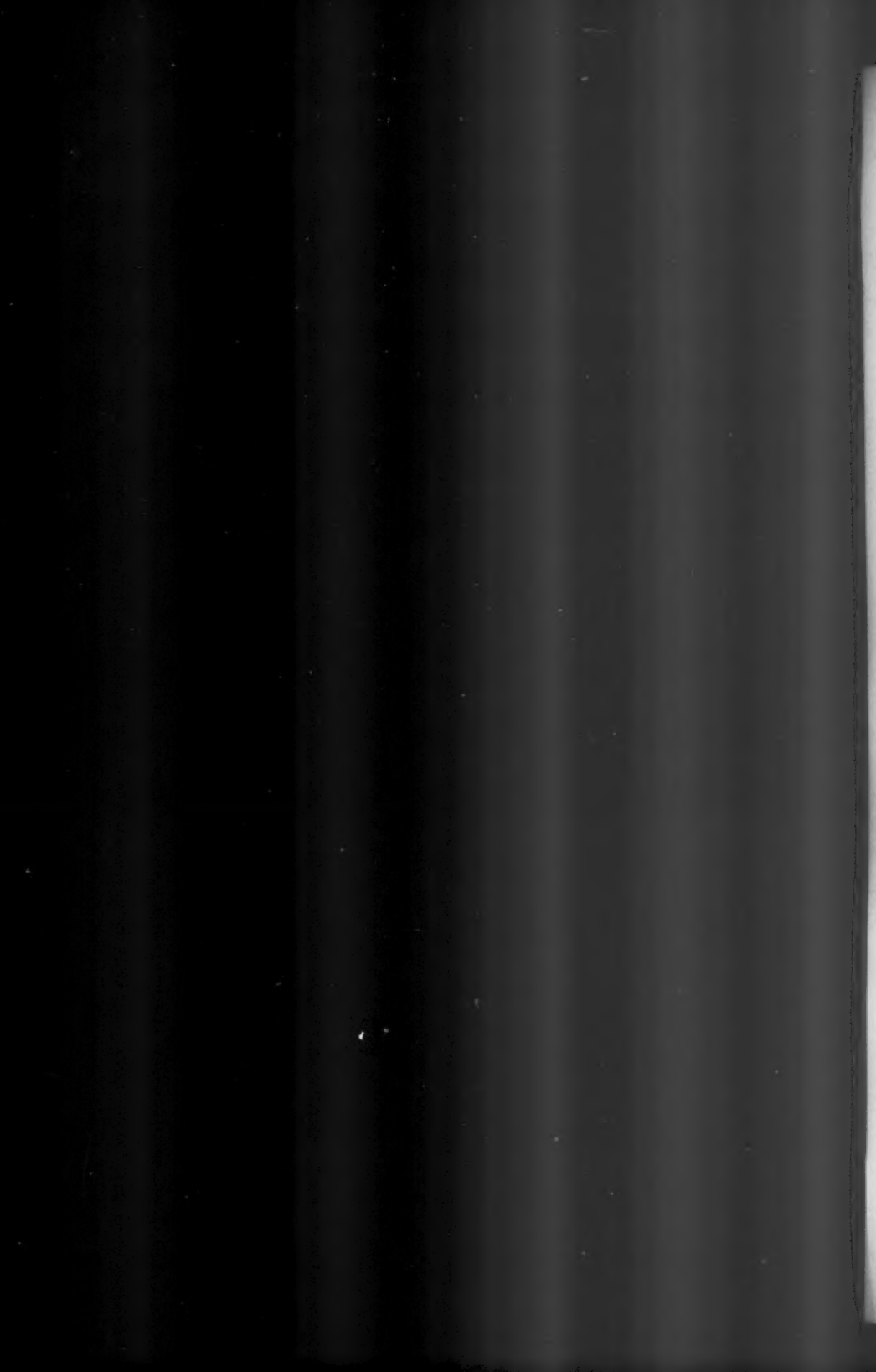
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THE
QUARTERLY JOURNAL
OF
ECONOMICS

FEBRUARY, 1919

PRICE-FIXING AS SEEN BY
A PRICE-FIXER

SUMMARY

The three agencies that regulated prices, 205. — Differences in their methods, 206. — The Price-Fixing Committee, 209. — Commodities regulated by the committee, 209. — Ground for their selection; heavy government needs, 210. — Prices were fixed as maxima only, 214. — Gradual elaboration and extension, 214. — Cost of production as the basis, 216. — Marginal, or "bulk-line," cost, and charts illustrating it, 218. — This basis of price-fixing justified by economic theory, 222. — Distinction between differences in cost based on physical causes and those based on human qualities, 222. — The real ground for stress on marginal cost was necessity of maintaining output, 228. — Special phases of some articles, lumber, cement, iron and steel, 229. — Proposals for an average or pooled price, 232. — Objections to this method, 233. — Conclusion, 238.

PRICE-FIXING during the war period was carried on by the government through three agencies: the Food Administration, the Fuel Administration, and the Price-Fixing Committee of the War Industries Board. The first two were the earlier; they came into existence through the act of August 10, 1917, commonly known as the Lever Act. The Price-Fixing Committee, to whose doings attention will mainly be given in the following pages, was of much later date. The President created it on March 14, 1918, as a Committee of the

War Industries Board. Its functions were independent of those of the Board, and it had authority to report directly to the President himself.¹

Both Fuel Administration and Food Administration had from the start well-defined objects and well-defined limits. In some respects their scope was wider than that of the Price-Fixing Committee, in other respects narrower. It was narrower in that their jurisdiction, as the titles indicate, was strictly limited as regards commodities — fuel and food only. On the other hand, it was wider in that they followed the articles all the way from producer to consumer. Both undertook to regulate not only producers' prices, but the prices of wholesale and retail dealers also. Hence they immediately established large administrative forces, and dealt with problems in many ways more intricate than those of the Price-Fixing Committee.

As regards the principles followed, on the other hand, the Food Administration stands in many respects apart from the other two. While it aimed, like the others, at securing fair prices and limiting profits to fair rates, the rates were fixed in most cases on a somewhat rough and ready basis, usually with regard primarily to a normal or customary percentage of return. The Fuel Administration and the Price-Fixing Committee made more systematic use of cost figures and cost accounts. It is by no means clear that their resort to elaborated cost figures led to more satisfactory results; but these figures raised general problems of a kind familiar to and not without instruction for economists.

¹ The members of the Committee were: Robert S. Brookings (Chairman); B. M. Baruch, chairman of the War Industries Board; William B. Colver, chairman of the Federal Trade Commission; F. W. Taussig, chairman of the United States Tariff Commission; H. C. Stuart, chairman of the Agricultural Advisory Committee; Hugh Frayne, representing labor; H. A. Garfield, Fuel Administrator; R. H. Montgomery, representing the War Department; John M. Hancock, representing the Navy Department. R. V. Norris served as representative of the Fuel Administration during the later sessions of the Committee.

Moreover, as regards one conspicuous item — wheat, and flour so far as resting on wheat — the basis of regulation by the Food Administration was different from that for any other commodity. Congress virtually took the matter out of the hands of any administrative or investigative body, and settled it once for all, by enacting an unqualified guarantee for the price of wheat. That became a minimum price; whereas in all other cases the price regulations took the form of fixing a maximum only. The Lever Act guaranteed a minimum price of \$2.00 for the crop of 1917-18 (that is, the crop which would begin to come to market on June 1, 1918). The minimum was later raised, under the discretionary power left to the President, to the sum of \$2.20 for that crop. The Wheat Committee of 1917, it will be remembered, had fixed this same price, \$2.20, for the crop which was being marketed in 1917. And the same price, as is well known, has been extended to the crop of 1918-19, still to come. The case was unique and remains unique. The figure of \$2.20 was reached by no careful cost inquiries or statistical computations, but in consequence of an almost precipitous desire to increase the wheat supply and also to placate the farmers. Its extension to the crop season of 1918-19 is likely to trouble Congress and the country for some time to come. In many ways the wheat episode stands by itself, quite separate from the other price-regulating experiments.

Another distinction between the several agencies needs to be borne in mind. Both the Fuel Administration and the Food Administration had for their first and primary object the protection of the public. The Price-Fixing Committee, as will presently be explained more fully, started with the design of protecting the government, and extended its function, but gradually and

slowly, toward the protection of the public also. Unlike the other two, it never extended its regulations to retail dealers and indeed in no appreciable degree to wholesale dealers. How far it might have been compelled to go in this direction had the war lasted much longer, is an open question. As matters turned out, its scope, however wide-ranging as regards the articles affected, was limited as regards the stage at which transactions were controlled. For this reason it had no large administrative machine, no great staff of officials and clerks, no enormous correspondence.

By way of further preface, it may be noted that in still another important respect there was a difference between the Food Administration and the Fuel Administration on the one hand, and the Price-Fixing Committee on the other. This was in their legal position. The legal weapon was strongest in the hands of the Fuel Administration, sufficiently strong for the Food Administration, but of very uncertain efficacy for the Price-Fixing Committee. The Fuel Administration had direct power under the Lever Act to fix prices. The Food Administration had an effective lever of control through its licensing power. Altho not authorized by law to fix prices, or to require from anyone the direct observance of any scale of prices, it had unlimited power to license producers and large dealers, and to withdraw licenses; and by the exercise of that power could bring recalcitrant persons to submission. The Price-Fixing Committee's legal position, however, was highly uncertain. The only weapon which the law clearly put into its hands was that of turning (by recommendation) to the President's power of commandeering supplies or a plant, the owner being then left to proceed in the courts, if so disposed, in order to secure a "fair price." There was also a possibility of further pressure through recourse to

the Railroad Administration and through the application of transportation priorities in favor of persons who conformed to its instructions.

But the legal powers of the Price-Fixing Committee, applicable at best only to articles needed for the use of the government, were of much less practical consequence than public opinion and patriotic spirit. The universal feeling of support to public authority in every step taken in connection with the war was the effective basis of its action. In fact, no occasion ever arose for putting to a test the nature or extent of its legal authority. The prices fixed were in all cases reached by agreement with the representatives of the several industries. In strictness they were agreed prices rather than fixed prices. The agreements were usually reached in cordial coöperation with the producers concerned, and thus were in reality voluntary. There were cases, however, in which they were agreements only in name. The representatives of some industries, tho they accepted them, did so virtually under duress. In these cases the Committee to all intents and purposes decreed prices, and was enabled to impose them, under the form of agreement, by a more or less veiled threat of commandeering, and also by the certainty that public opinion would condemn those who failed to accede.

The commodities which came within the purview of the Price-Fixing Committee constituted a long and heterogeneous list. It included not only important staples like iron and steel, copper, lumber, wool, hides and leather, cotton fabrics, nitric and sulphuric acid, but also articles of less quantitative importance, like nickel, aluminum, quicksilver, zinc, brick, cement, hollow tiles, crushed stone, sand and gravel. Some account of the mode in which several of the articles were dealt

with has already been given in these columns.¹ It is not the purpose of the present article to consider these in further detail or indeed to consider in detail any among the commodities dealt with. Its purpose is rather to consider some general aspects of the situation and some economic principles involved or supposed to be involved.

The explanation of this great variety of articles — the connecting link between them — is found in the circumstance that all were needed in great quantities by the government. The action of the Committee in every case had its origin in the circumstance that government purchases were on a great scale and threatened to disturb market prices. The extension of the function of the Committee to the regulation of prices for the public was, if not an afterthought, at all events not among the things contemplated at the start. The Committee stepped in when government purchases threatened to upset the market, but soon found itself compelled to protect the public also.

For this sort of action, and for this ground of selecting the price-regulated commodities, there was a sound basis in economic principle. Where government purchases are on such a scale as to absorb a very large proportion of the available stock or accruing output, the ordinary formulae of supply and demand are no longer applicable. When a government buys for war purposes, it is desperately determined to secure what it needs irrespective of price. To put the case in technical terms, demand is virtually inelastic; the demand curve is almost perpendicular; there is no such thing as a determinate equilibrium price. This is the explanation of the soaring of prices, the wide and abrupt fluctuations, the speculative shifts, the quick response to rumors of gov-

¹ See the articles on sugar, iron and steel, perishable produce, wheat and flour, and copper, in the issues of this Journal for August and November, 1913.

ernment policy. The tendency to a runaway and unpredictable market becomes still more marked if there happen to be several government agencies bidding against each other. Such was the situation, as has already been pointed out in these columns¹ when the representatives of the belligerent allies bought wheat in the American market in the spring of 1917. Such too was the case when they were buying steel plates in 1916-17. So, again, when they were buying munitions and ordnance supplies from American manufacturers on terms which caused the derived demand by these manufacturers for iron, copper and coal to become virtually inelastic. The munition contracts were so profitable that the makers were almost indifferent to the prices they might pay for their supplies. At almost any price it was profitable and imperative to secure the needed materials.

And this too was the situation when the United States itself stepped into the war. Almost the entire supply of many important articles was wanted for government use — partly by the United States government itself, partly by contractors working for the government, partly by the Allies. The extent of the indirect demand (from contractors) was not always known; but it played a great part, and was of essentially the same character as that of the government itself. When things were at their height the total non-private demand for iron and steel absorbed 85 per cent to 90 per cent of the tonnage. This was the maximum; but at no time between the autumn of 1917 and the autumn of 1918 was the demand for less than 60 per cent. For copper the proportions of maximum and minimum demand for public use were no less. Nine-tenths of the nickel was taken, dur-

¹ See the discussion of wheat prices in 1917, by W. Eldred, in this Journal for November, 1918, p. 1.

ing the war period as a whole, for government and Allies' use, and at least as much of the aluminum. For other commodities the requirements, tho not such as to dominate the market completely, were yet so great as to threaten to demoralize it. During the war period half of the zinc and half of the quicksilver were taken for government use. Of the coarser cotton fabrics, as much as 60 per cent was at one time taken by the government; of the country's entire output of cotton manufactures, as much as 30 per cent. For southern pine lumber the government's demand, through the entire period of war, was for more than a fifth of the cut, and during the summer of 1918, when the peak was reached, for more than a third. For spruce and fir (Washington and Oregon) the proportion of the whole was less; but certain sizes suitable for ship-timbers, and certain kinds suitable for aircraft, were completely taken over, and the "side-cut" from these became an almost dominant factor in the commercial market. Of sulphuric acid, nearly 40 per cent was taken when things were at their height; and of nitric acid as much as 65 per cent. In particular localities where the government, directly or through contractors, was engaged in great dock and harbor operations there was a demand for all the sand and gravel available, and hence an occasion for price-fixing even on these out-of-the-way articles.

The conditions under which the government demand appeared were not always the same. Usually purchases were made partly by the Army Quartermaster or other government department, partly by the Allies, partly by contractors engaged on government work; what was left, went to the general public. In these cases, maximum prices having been fixed, the several parties proceeded to make their purchases independently. In other cases the government purchased once for all the entire

supply or output, and undertook for itself the work of distribution among would-be users. This, for example, was the procedure with wool. The Price-Fixing Committee established maximum prices for wool, and at these prices the government took over the entire domestic supply. Not only that; the government also bought a considerable quantity of imported wool, secured from the British government, as it happened, at lower prices than those at which the domestic material was bought. And having bought the entire output and having doled out among its clothing contractors what was needed by them (much the larger proportion of the supply), the government treated the remainder, and especially such grades as were not suitable for government needs, as available for civilian use. In this case, as in so many others, the preparations for a continuance of war upon an enormous scale were so far-reaching that the government found itself, on the unexpectedly early close of hostilities, in possession of a great supply of wool which it had no further occasion to use. There was here a difficult problem, not dissimilar to that of the guaranteed wheat price for the crops of 1918 and 1919. The losses on transactions of this kind will swell the war bills by hundreds of millions.

In the main, however, the Price-Fixing Committee rulings were applied under conditions less simple. In most cases, the government itself took a part only of the accruing supply; the Allies, and contractors and middlemen for the government and Allies took more; something was left for civilian use — a small fraction in some cases and a considerable one in others. Soaring prices, speculative advances, manipulations by middlemen, a runaway market — these were the conditions which impended, and which price-fixing was primarily designated to remedy.

The prices established were not in strictness fixed; they were maximum prices. The sole exception, as already indicated, was wheat; here there was a guaranteed minimum price. In every other case, whether as regards the Food Administration, the Fuel Administration, or the Price-Fixing Committee, the published prices were not to be exceeded, but need not necessarily be reached. In practical effect, nevertheless, the maximum prices as a rule were also minimum prices. This was the consequence of the conditions of demand out of which the business of regulation arose. The government departments — the War Department, the Navy Department, the Fleet Corporation and Shipping Board, the Railroad Administration — were usually guided in their purchases by the fixed maximum prices, and paid them once and for all. Allied purchases were in effect government purchases. Civilians as a rule gladly followed suit. Yet instances arose — with zinc for example, and lumber — where the market prices sank below those fixed; and thereupon the maximum prices were shortly reduced. These occasional saggings below the maximum prices naturally appeared first in non-government transactions. When they appeared, beginning sporadically and becoming gradually more pronounced, government departments also began to buy below the maximum figures; and then, with the expiration of the periods set by the price-fixings or agreements, new and lower figures were established. In every case, at all events, the form of the price-fixing arrangement was that of an agreed maximum price, not to be exceeded.

As time went on, a gradual transition took place toward greater elaboration and wider extension of the price-fixing arrangements. Several stages can be discerned. At first there were temporary, provisional arrangements. Blocks of commodities urgently needed

were turned over to the government on a patriotic, semi-sentimental basis. The sale of a great quantity of copper to the government in the early stage of the war was the most conspicuous instance. So with the sale of steel plates to the government. These earlier transactions were arranged by a committee of the Council of National Defense, before the establishment of the Price-Fixing Committee. They served their turn, yet soon proved impracticable as permanent arrangements. The patriotic producers sold to the government at low prices; their rivals, less public-spirited or simply less conspicuous, profited by selling at a higher price to the public or perhaps even to the government itself. Hence there soon developed a stage when prices were fixed not in single transactions, or for short periods, but for all government transactions and through a stated period. In this second stage, nevertheless, it was still the government price that was kept under control, not the price to the public. The inevitable result was again a discrepancy in the position of different producers or sellers. Those who sold to the government at the fixed prices were less fortunate than those who could sell (as usually was the case) to the public at higher prices. The process of fixing prices for the government but not for the public necessarily must have entailed sooner or later a rationing of the government orders, each producer to supply his proper quota to the government — a task obviously of great administrative difficulty. Hence, contemporaneously with the establishment of the Price-Fixing Committee itself, and for almost all transactions which came under the jurisdiction of that committee, the principle was followed of fixing a maximum price for all sales, whether to the government or to the public. President Wilson himself strongly urged such action, on the ground that it was not fair dealing on the government's

part to take advantage of the public. Rationing might indeed be entailed by this procedure also; but it would be rationing not between producers, but between purchasers. The stage of rationing, however, was never fully reached, and at all events, was never squarely faced. Substantially, the War Industries Board achieved something of the sort, by its regulation of industrial output and still more by its transportation priorities; but these apportionments were never directly connected with the activities of the Price-Fixing Committee. In the main the course of action by that Committee was comparatively simple: a maximum price, the same for public purchases and for private, the government taking all it wanted and the general public scrambling to buy at the maximum prices whatever it could get.

The basis upon which the findings and agreements of the Price-Fixing Committee rested was in the main the familiar and plausible one of cost of production. This, be it noted, had not been the case with the minimum price of wheat, settled as it was by Congressional action; nor had it been the case with the earlier sales of copper and steel to the government at prices below the market rates ruling during the early part of 1917. But as the price-fixing arrangements came to be systematized there developed also a systematized application of the cost principle to the price-fixing arrangements.

The figures and statistics of cost which were utilized were supplied in all cases by the Federal Trade Commission. On schedules sent out by it cost figures were furnished by the several producers, were checked and arranged by the Commission, and were presented to the Price-Fixing Committee as the basis upon which its findings and agreements should be reached. The labor

thrown on the staff of the Trade Commission by these operations was enormous. It deserves to be put upon the record that the results were achieved with a high degree of thoroughness and success. Not that all desired or needed information was secured, or that the figures were in every case impeccable; but the accounting staff of the Commission was expanded with great rapidity, and was brought to a state of efficiency quite as high as could have been reasonably expected. Considering the suddenness of the exigency, and the extraordinary range and volume of the transactions that had to be followed, the achievement was a notable one.

As was to be expected, very varying conditions of cost and very varying relations between cost and price appeared in different industries. Sometimes there was but a single producer, in possession of a complete monopoly. Of this the most striking illustration was found in nickel, virtually all of which was produced by the American Nickel Company; and oddly enough this was one of the few cases in which, notwithstanding heavy increase in public demand and an eventual absorption for military use of virtually the entire supply, the price remained the same as that before the war, and was so maintained throughout. A similar case of monopoly was that of aluminum. Sometimes, and more complicated as regards the observable or desirable relation between cost and price, the conditions were those of joint cost — so-called by-products. The most conspicuous illustration was that of hides, whose price in turn necessarily dominated the price of leather. Another of the same kind was in sulphuric acid, which in some cases is a by-product from other operations, in other cases an independent or separable product. To apply any of the accepted economic formulae to the fixing of a price under conditions like these would have been well-nigh

hopeless. A frankly opportunist policy alone was possible.

The cases of most importance quantitatively, however, and those typical also of the general character of the price-fixing operations, were less complex, and gave or seemed to give better opportunity for some application of general principles and general reasoning. As a rule the products dealt with were turned out by many competing producers, and with costs that could be ascertained and segregated. Such, among the articles controlled by the Price-Fixing Committee, were lumber, copper, iron ore, iron and steel products; sugar for the Food Administration, and coal for the Fuel Administration. In all these the same phenomenon commanded attention, namely, that of marked differences in cost for different producers — a gradual shading from low cost producers at one extreme to high cost producers at the other. A cost curve or supply curve of the familiar sort was easily to be made out.

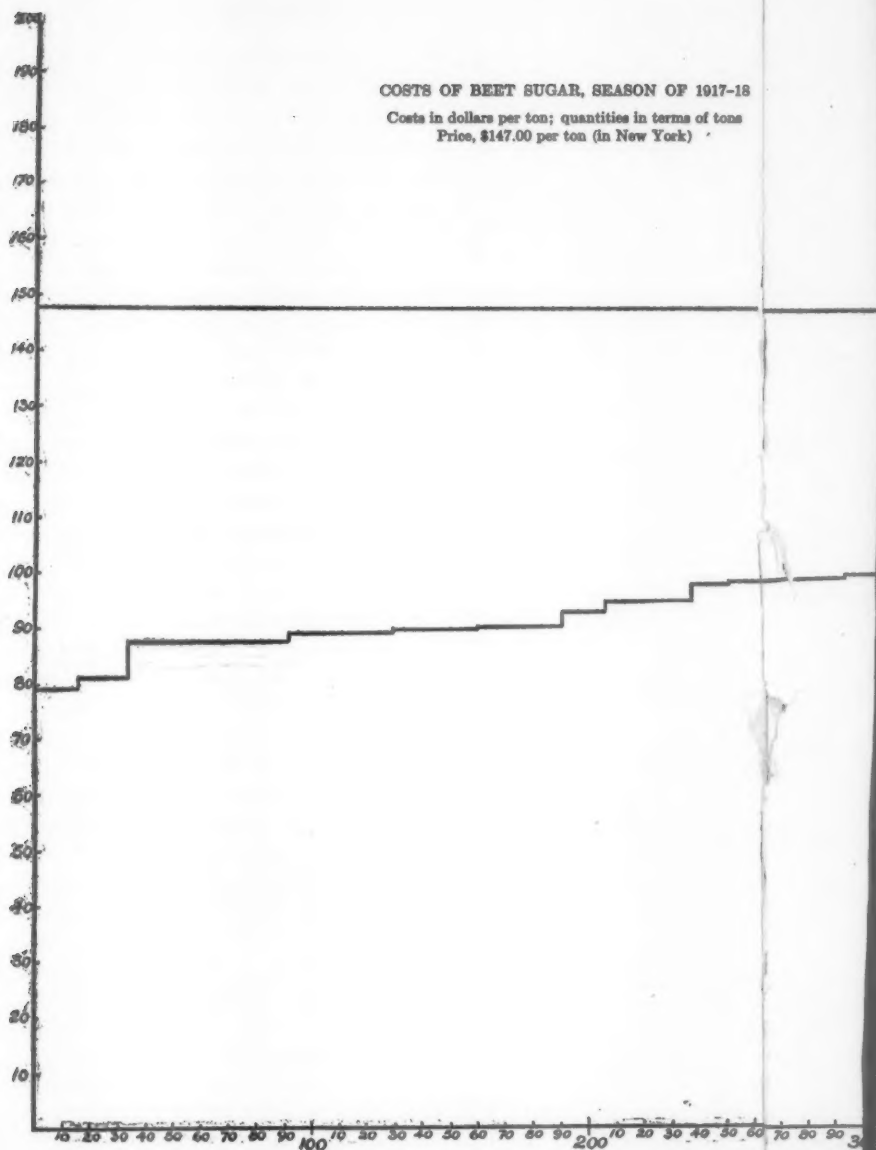
The appended charts are representative. They show quantities of output, and costs; the horizontal dimensions indicating the volume of product from each concern, the vertical dimensions the unit cost of the product. The coal chart is but one of a large number of the same kind prepared by the Fuel Administration. It is selected because it refers to the most important coal region of the country — that in southwestern Pennsylvania, where is the famous Connelsville field. The data for the coal charts were secured from the coal operators, as from other producers, by the Federal Trade Commission, and were then checked, corrected for bookkeeping errors, and charted, by the Fuel Administration. The collection of coal charts thus made constitutes an imposing mass of interesting material. The beet sugar chart is based on figures collected and

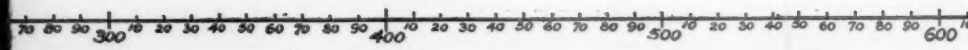


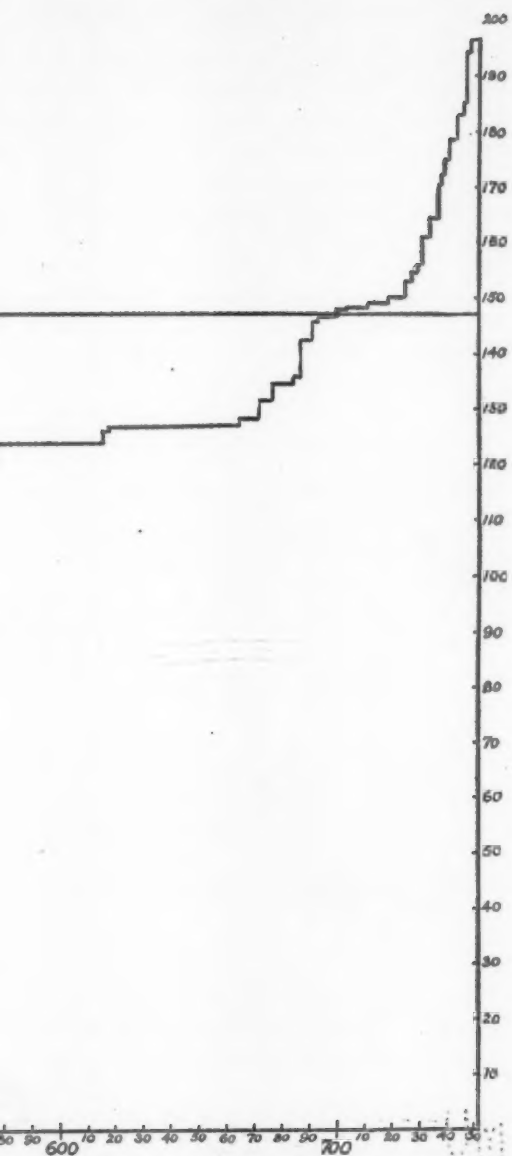
COSTS OF BEET SUGAR, SEASON OF 1917-18

Costs in dollars per ton; quantities in terms of tons

Price, \$147.00 per ton (in New York)







charted by the Tariff Commission and placed by that body at the disposal of the Food Administration. The lumber chart shows costs on the same plan, but for two dates, for the great fir lumber region of the Pacific Northwest. It is a combination of two charts furnished, at an interval of three months, by the lumber producers themselves.¹ The Federal Trade Commission did not usually put its data into graphic form; hence the utilization in this case of charts prepared for the Price-Fixing Committee by the producers. Probably the cost figures on which they rest would have been corrected in some details had they been submitted first to the supervising accountants of the Trade Commission. But there was abundant experience to show that corrections of this sort affected details only, and brought no serious changes either in averages or in the slope of the curves. Virtually these charts represent the data on which the Price-Fixing Committee based its action.

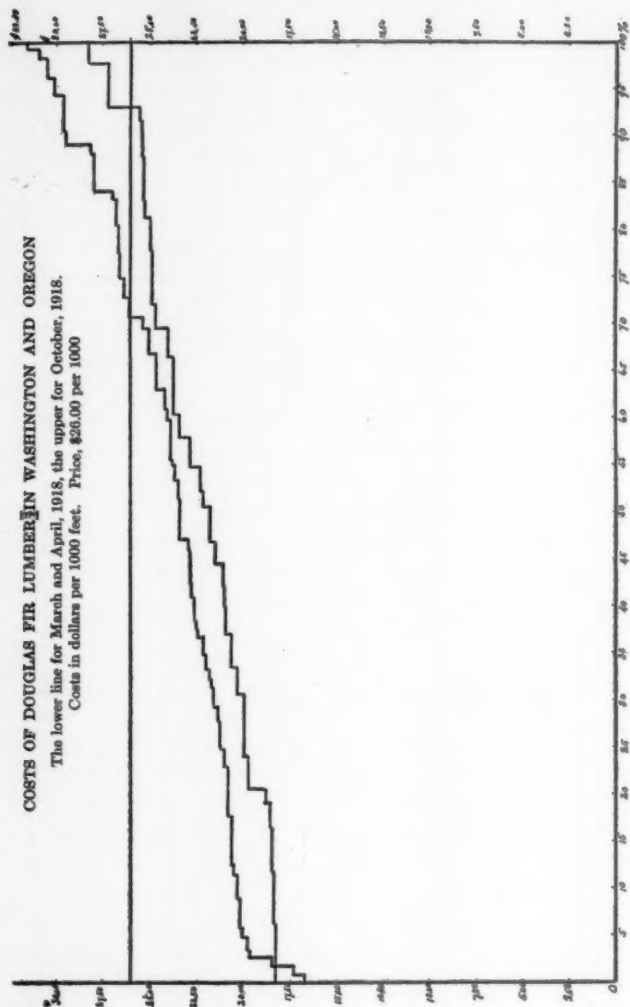
In general, in the price-fixing operations for such articles, regard was had to the marginal producers. A new jargon was often used, superseding that of the economists: the "bulk line" producer and "bulk line" cost were spoken of. It was cost of production at the hands of this marginal or bulk line person that usually formed the basis of the prices fixed. Sporadic cases of exceptionally and extremely high cost were disregarded, and properly so. Extreme high costs in individual cases are part of the flotsam and jetsam of economic life — accidents, of no real significance. The marginal or price-determining producer was found at the point where from 80 per cent to 90 per cent of the output was included. As a rule a price was fixed which would "protect" four-fifths or nine-tenths of the entire output.

¹ The significance of the two dates and the two cost curves given in this case is explained below, p. 229.

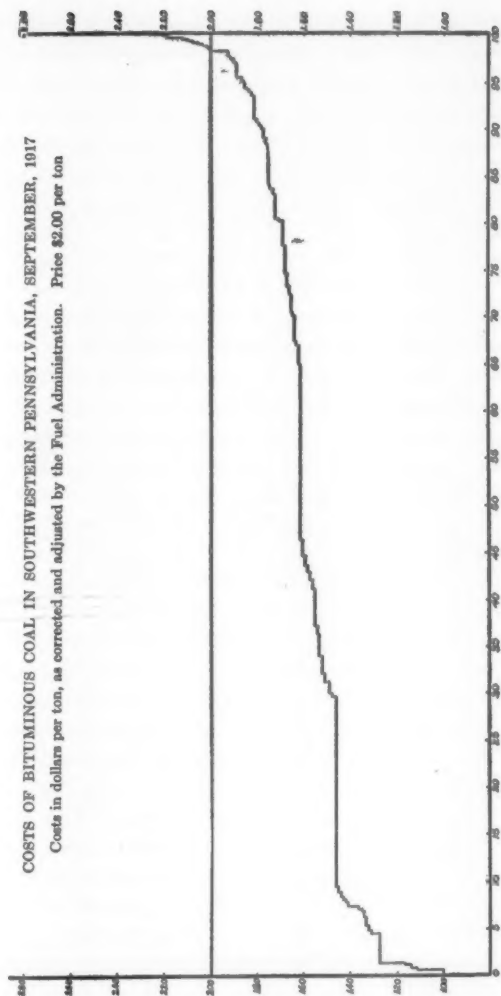
COSTS OF DOUGLAS FIR LUMBER IN WASHINGTON AND OREGON

The lower line for March and April, 1918, the upper for October, 1918.

Costs in dollars per 1000 feet. Price, \$26.00 per 1000



COSTS OF BITUMINOUS COAL IN SOUTHWESTERN PENNSYLVANIA, SEPTEMBER, 1917
Costs in dollars per ton, as corrected and adjusted by the Fuel Administration. Price \$2.00 per ton



A natural corollary of this method of procedure was, of course, the frank recognition of the fact that many low cost producers might reap large profits; and this in turn led to the expectation, even the assumption, that such producers would be subjected to a heavy excess profits tax. A considerable tax of this kind was already being collected in 1918, under the revenue act of 1917, on the incomes of 1917; an even higher one, applicable to the incomes of 1918, was in prospect. In this matter, as in so many others, the unexpectedly early cessation of hostilities caused a halt, and tax legislation was not enacted with the expected speed, perhaps will not be on the expected scale. At this writing (January, 1919) it is still uncertain what manner of excess profits tax will finally be levied. So far as price-fixing policy was concerned, a rigorous tax of this kind was regarded as a part of the general program.

This concentration of attention on the marginal producer has an appearance of obedience to economic theory. Cost at the hands of the marginal producer determines price; the infra-marginal man gets a producer's surplus; this producer's surplus is a fit object of taxation. The price fixed seems to be that which would obtain if economic principles were in normal operation. So delightful a verification of economic principles, so complete an empirical confirmation of their soundness, quite warms the economist's heart.

And yet, reflection leads one to pause. The case is not so simple, the confirmation of theory not so conclusive. In important particulars the situation is not the same as that contemplated when we discuss marginal cost in relation to price. The price fixed on the basis just described is by no means necessarily the same as that which would obtain if normal forces were working under normal conditions.

First, it deserves to be marked that the differences in cost here exemplified are by no means due solely, perhaps not predominantly, to natural or physical causes. In the familiar exposition of this sort of situation — the orthodox exposition — the differences in cost represent variations in the response of nature to man. The circumstance that they are merely employers' costs or expenses, not labor hours or labor sacrifice, does not in itself impugn their significance; since the money costs may be presumed to run parallel with "psychic" costs. More important is the complexity of the causes which are found to underlie the several figures. The figures which the charts illustrate are simply the actual money costs of the several concerns, as made out by accountants. The high cost in a given beet sugar factory may indeed have been due to the high price of beets, and that in turn to poor land or unsuitable climate. But it may have been due to bad farming, a bad season, bad factory management. The high cost of lumber may have been due to a thin and distant forest, or to an inadequate and ill-managed sawmill; the high cost of copper due to mining conditions inherently bad, or to a strike, a shut-down, or bad engineering in the mines. It is all one to the accountant, but by no means all one to the economist.

True, some of these differences may not unreasonably be supposed to offset each other. While a concern whose cost is high for a particular season may be in that unfortunate position because of accident or the vicissitudes of a particular season or ill-success in management, that same concern may advance in the following season to a moderate cost or low cost position. The reverse may happen: the low cost producer of this year may be the high cost producer of next year. And these shifts will tend to offset each other, leaving the scale or curve

for successive years very much the same. The marginal cost may not shift appreciably, even tho there be shifts of the producers who are incurring it. After all, in any set of concrete facts, anywhere and at any time, we cannot expect to find more than approximations to economic normality. And perhaps in this case the approximation, after all correction and qualification have been made, does serve to confirm general economic reasoning. It is probable that differences in natural resources are the most important among the causes determining the general slope of the supply curves here adduced.

But still another factor unmistakably shapes these curves. The differences in cost are found not only in the "extractive" operations, but in the purely manufacturing ones as well. This is perhaps most strikingly brought out in the case of sugar, where it happens to be possible to separate manufacturing costs from agricultural costs.¹ But, as soon as inquiry was made beneath the surface, the same variations were unmistakably to be found in other industries also. They are due mainly to differences in managing capacity. The familiar question of the "rent" of business ability once more obtrudes itself; the puzzling question of the significance of a marginal business man. Economists are doubtless in the right when they apply to differences in business ability reasoning analogous to that applied to varying fertility of soil. But here there is even more of approximation, of long run generalization, of uncertain conformity to any precisely-stated rule. The producer who appears to be marginal upon your chart, and who for a given season is fairly to be considered a "bulk line" person, may be after all one who is in process of

¹ See the able discussion of sugar costs by Mr. P. G. Wright, in this Journal for November, 1917.

elimination; who is holding on for the time being, but is bound to disappear in the long run and is not to be taken as a "fair" price-determining unit. There were abundant grounds for supposing this to be the case with the concerns that appear in the charts as the marginal producers of crude iron and of copper. So far from its being true that these producers, under ordinary market conditions, would determine the price, the reverse is more nearly true. It is the market price which determines which among them shall survive, not their cost that determines the market price.

At the risk of digression, a word may be added on the bearing of these distinctions on the applicability of a marginal cost principle. If the differences in cost which are indicated on these charts rest on physical causes — if they are due to forces in nature, not in man — the normal or long-period price may be expected to conform to marginal cost. But if they rest on the differing abilities of men, the normal price may be expected rather to conform to average cost, or at all events to fall below the "bulk line." In debates before the Price-Fixing Committee and in its own deliberations, the question was raised whether regard should be paid primarily to average cost or to marginal cost. Assuming that the object to be attained is conformity to fair price in the sense of long-period or "normal" price (an assumption of which more will be said presently) the answer would be, marginal cost if the differences in cost arise from causes in nature, but average cost (or something like it) if they arise from differences in managing ability. The marginal producer, if in that position because he is the least capable person, is not the one whose conditions of production are decisive. Such a producer as has just been intimated, is probably in process of disappearing. He will disappear very soon in times of depression, will drop

out gradually and haltingly in ordinary times, will hold his own with deceptive prosperity and success in periods of strong demand and unusual general profits. He is not a representative producer: not a person whose operations determine the long-period price range. Rather, he is one whose fate is determined *by* the price for the time being. Whether the long-period or normal price itself is an "average" — some sort of mean — of the varying costs of different managers, need not here be considered. I see no good theoretical reason to expect it to conform with exactness to any average; tho it might be a safe and easy working rule to consider average cost to be the same as long-run representative cost. But it would not be in accord either with current economic theory or with business experience to give to the least efficient manager (even if the extreme cases or "freaks" be disregarded) a dominant price-determining position. The representative firm (wherever in the scale it is to be found) is in that position.

The case would be different if the differences are the ineradicable results of soil, site, or abundance and quality of minerals; then one might be justified in proceeding on the ground that the normal price-determining cost was marginal cost at the hands of a manager of representative ability. In the cases represented on the charts (for lumber, sugar, and coal) the probabilities are that differences in nature's resources explain the upward trend of the cost curve; and hence that price in the long run would tend to conform to marginal cost, not average cost.

But, there remains the most serious qualification of all to this supposed verification of economic theory. The doctrine of price determination by the marginal producer is not to be considered as applying to anything but a long-run price. It has no bearing on the short-period

or seasonal price. Only over a period of years does marginal cost have a determining influence on price. The normal price which we speak of is one of the fictions or devices of the economist, like economic rent or an index number. It corresponds to no specific concrete fact which can be observed or identified; it is an artificially constructed type, a representative fiction. For the purposes of generalization a device of this kind is not only permissible, it is most useful. Yet it is not to be supposed identical with any specific fact. The price actually obtaining in any season for a given commodity may be higher or lower than the marginal cost figure reached on the "bulk line" basis.

This divergence of market price from any cost figure is obvious and familiar in the case of commodities subject to seasonal fluctuations, like wheat or sugar beets. It is no less unusual for commodities like lumber or copper. The price which is normal or "fair" for a given season or for a short period may be quite different from the marginal cost figure of that season. It was often said that the Price-Fixing Committee should pay regard to market rates, as settled by demand and supply; that it should have ferreted out the fair market price which would have obtained under the play of "economic laws." Now, quite irrespective of the impossibility of ascertaining a determinate market price under the conditions of war demand, it would still be true that any market price, even when resulting from an ordinary equilibrium of supply and demand, would probably not have been identical with the marginal cost price. For any given season and at any given time, your market equilibrium price may be much below or much above the marginal cost price. Price-fixing on the basis of marginal cost for the time being is by no means the same as price-fixing in accord with the ruling influences of the market at that date, or for that season.

No: the ground upon which this focusing of attention on the bulk line producer could be justified was an entirely different one. The guiding factor was the necessity of maintaining output. The commodities dealt with were, to repeat, such as were wanted in great quantity by the government. A large output was imperatively needed, or at least was supposed by the military authorities to be needed. This was the real justification for bolstering up the marginal concern and fixing a price at which the marginal concern could continue in business. This too was the ground for excluding from consideration the extraordinarily high costs of the producers at the extreme right of the curve; sporadic contributors who probably could not have operated with profit under any price conditions, and whose output would be no more and no less whether prices were fixed at a somewhat higher or somewhat lower figure. But the bulk line producers had to be maintained. Their output was needed, and the only way to secure it was to pay them a price which would induce the continuance of operations. It was this situation which caused the marginal producer to occupy such a dominant place in the price-fixing operations.

As time went on this dominance came to be less strong, or rather it came to be exercised under different conditions and with different results. In some industries the situation began to change. Even where the government remained the heaviest purchaser, it no longer required every ounce that could be produced. In many industries, indeed in most, a substantial quantity continued throughout to be allowed for civilian uses; as time went on it became a question how far these uses needed to be curtailed and how far the transfer of labor and capital to other more essential uses should be stimulated. As regards steel and copper, it is true, the

government absorbed to the very end almost the entire output; what remained for civilians was as essential as what was taken by the government itself. Fuel was no less urgently needed. Other articles, however, were not so vitally necessary. As the war went on, and its stern requirements became more and more apparent, every one perceived that if the industries indispensable for military and civil purposes were to have their full quotas of labor and capital, undiminished output was impossible in non-essential industries. Prices, like priorities and fuel, could not but be adjusted to a new basis.

This stage, in which price-fixing might be used as one among the measures for confining industry to military and essential needs, had been barely entered on when the cessation of hostilities put an end to the whole series of regulatory measures. Where it did begin, however, price-fixing took a new turn. The change of attitude took the form not so much of an enforced lowering of the existing maximum figures, as of a refusal to advance them. Lumber producers, for example, were able to show that their costs of production were rising. The two cost lines on the lumber chart (on p. 220) show how the cost curve for fir lumber of October, 1918, runs above that for the spring months; the marginal cost at the later date is higher by several dollars. Nevertheless the maximum price of lumber was not raised by the Committee; the previous basic rate, \$26.00 per thousand, was left unchanged. The maintenance of the unchanged maximum, notwithstanding increased cost, was frankly announced to rest on the ground that the same output was no longer needed; civilian construction operations were to be cut down. The price, while left at the same figure, was in effect lowered, and a probable lessening of output squarely faced. The same policy —

that of maintaining maximum prices unchanged notwithstanding proved increase of cost — was followed for southern lumber, and on the same grounds. In both instances, it deserves to be recorded, the producers assented without demur. The unwelcome decision was accepted as an inevitable part of the war policy of cutting down non-essential production.

A case somewhat similar was that of cement. The government needed much cement for its construction operations, and indeed took the larger part of the output. But the output itself was lessened in consequence of the war. Building operations, except for government needs, were sharply curtailed; an effective means of enforcing curtailment in this case being the refusal of full coal supply by the Fuel Administration. Of the diminished output, the government in some localities took nearly one-half, but at a price below what would have been fixed on a basis of marginal cost for normal or pre-war conditions — a price barely sufficient to maintain production up to the government needs. Much the same course was followed when fixing a price for bricks in the regions lying about the large cities of the congested eastern district (New York, Philadelphia, Baltimore, Washington). Here too the government was a dominant purchaser, yet took less than the existing establishments could produce and paid a price below that to be expected under normal conditions of cost and demand.

Not all cases, however, of refusal to adjust prices to changing cost conditions, are explicable on grounds of this kind. A similar course of action was followed for iron and steel, but under different conditions and with different purposes and results. On steel, and more particularly the various forms of semi-manufactured steel, the prices originally fixed were left unchanged,

notwithstanding unmistakable advances in cost. The first schedule of prices for iron and steel had been made up before the Price-Fixing Committee itself began operations. Comparatively early in 1917, a committee of the Council of National Defense (which was to some extent a precursor of the Price-Fixing Committee) arranged with representatives of the industry for a sharp reduction of prices below those then ruling. In the making of the arrangement regard was indeed had to figures of cost which had been secured by the Federal Trade Commission, but no endeavor was made to base prices on any cost figures, either marginal or average. The cost figures of the Federal Trade Commission were used in effect as a means of persuading the producers to accede to marked reductions — indeed reductions so great as to effect a virtual revolution in the price conditions then obtaining. Notwithstanding these drastic cuts, profits for the great integrated concerns still remained high, even for those among them who might be regarded as marginal producers.

The prices then reached, by a sort of compromise arrangement, were left virtually unchanged during the price-fixing period. Costs, it is true, were advancing throughout that period, and the advances were gradually reducing the handsome profits which had been permitted. This might be interpreted as a lowering of the effective prices. And yet in this case unrelaxed maintenance of output, even an increase, was desired. The simple fact was that notwithstanding the paring of profits, inducements were still sufficient for a maximum output.

Here again an exception must be noted. What has just been said applies to the "hot metal" people — the great integrated concerns which use their own ore, their own coal, their own smelted iron, and which produce by far the largest part of the iron and steel. The

case was different with the non-integrated producers — the iron miners who sell their ore, and the "cold metal" people who produce pig iron and sell it for foundry and other uses. These were in a somewhat different position. The prices fixed for iron ore and pig iron were by no means so assuredly lucrative to the marginal producers, and in the course of the price-fixing readjustments some advances were made in the prices both of ore and of pig. They affected, however, a comparatively small portion of the product and were not important items in the general schedules of iron and steel prices. In the main, these prices, originally very liberal, were sustained without revision, with the consequence that the gradually rising costs resulted in a diminution of profits.

From time to time quite a different method of fixing prices was suggested as a means of securing undiminished output by producers whose costs varied widely. This other method contemplated something in the nature of pooling. Low cost and high cost producers alike were to receive prices in proportion to their several costs. The government was to charge itself with the average cost, and, so far as it allowed civilians to supply themselves, was to charge the civilians with that average. The process obviously would have necessitated the government's taking over the entire supply, and apportioning or rationing to civilians whatever was not needed for its own use.

This proposal rested mainly on an unwillingness to permit the low cost producers to secure high gains. Any price paid uniformly to all producers necessarily meant differences in profits. When that uniform price was fixed on the basis of the marginal or bulk line producer, the profits of those favorably placed were not only great, but greater than they would have been under normal

conditions. In the essential industries, such as steel and copper, the necessities of the situation called for the maintenance of high cost and inefficient producers whose position under no ordinary circumstances would be dominant. True, it was urged that the high gains for the fortunate producers were likely to be reached by the excess profits tax. But it was also urged that no such tax could be a complete offset, and that it would be wise to proceed at once upon a pooling basis: let the government's buying price be cost for each several producer, and average cost, not marginal cost, be the basis of any sales made to the public. The government as well as the public would secure the goods at lower prices.

This solution of the problem may be fairly said to have commended itself to no business man, and to few, if any, among the economists. Yet some of the objections raised against it were of doubtful validity. It was said to run counter to economic principle or economic law — to be inherently and necessarily bad. But this was hardly more than fencing with words. More serious was the argument that it would penalize efficiency, removing all incentives to keeping costs down. The objection would have been serious, perhaps conclusive, against the long continued maintenance of any such arrangement. For a short time, however — say for a period of a year or thereabouts, and this was generally expected in the summer of 1918 to be the duration of the war — little evil on this score was to be anticipated. For the time being industry was likely to go on as before, the efficiency of the different producers remaining very much the same by sheer force of impetus, if not from motives of patriotism.

The conclusive objections to a pooling system related to the accounting and administrative problems involved. The plan would have necessitated accurate ascertain-

ment of cost for each producer. There is an obvious difference between the amount and character of the accounting data needed for this purpose and those needed on a bulk line or marginal cost basis. For the latter purpose it is necessary to ascertain only an approximate marginal cost figure, and to settle the price in accord with this, irrespective of its accuracy for any individual producer. It is quite unnecessary to check the accounts for the great range of producers whose costs fall below the marginal line. The low cost men may be known to be in a favorable position; but just how low their costs are, or just how high their profits, is not material. But on the pooling plan precise information on costs must be procured for each and every producer. Virtually every one then operates upon a cost plus profits plan. Verification and adjustment of accounts, decisions on inventories and depreciation, distinctions between capital and income account, auditing, suspected and actual manipulation, squabbling, charges and counter-charges—these are the inevitable accompaniments of any such procedure. The cost plus profits contracts of the earlier stage of the war illustrate them sufficiently. The difficulties into which the Food Administration was led in its application of a cost plus profits system to the regulation of flour mills during the season of 1917-18 supply another illustration.¹ This mode of dealing with a vast number of establishments, over a great range of industries, threatened such ominous complications that any administrative or regulative body could not but shrink from it.

It is this last consideration which explains why the suggestion was pressed in two cases only: both of them cases in which the number of individual producers was small, and in which the problems of cost accounting and

¹ See the article by W. Eldred, in this Journal for November, 1918, p. 1.

cost analysis were simple, or at least seemed to be simple. These two cases were anthracite coal on the one hand, and steel rails on the other. Anthracite coal was in the jurisdiction of the Fuel Administration; steel rails in that of the Price-Fixing Committee. Virtually nothing ever came of the suggestion in either direction. Altho the Administration and the President were reluctant to sanction an increase in the maximum prices of anthracite coal, such as advancing costs justified, and urged an attentive consideration of the possibility of keeping the price down by some method of averaging or pooling, marginal cost was accepted as the determining factor even in this case.

The plan was most urgently pressed for steel rails. Here the number of individual producing concerns was small; costs varied greatly, and at the same time could be ascertained with an unusual degree of accuracy. Moreover, all the standard rails were bought by the government, the civilian consumption being restricted to rails of special sizes — an extremely small percentage. The government demand came chiefly through the War Department and was for rails to be used for the transportation needs of the army in France. The Railroad Administration, as it happened, was not for the moment directly concerned, being in the fortunate position of inheriting contracts made in earlier times by the railroad companies at prices below those which would have resulted from any figures either of marginal cost or average cost. Yet the Railroad Administration urged the application of a pooling plan to steel rails. Notwithstanding the conditions which thus favored the plan in this case, or at least made it more feasible, the final decision was the other way. The price of steel rails was fixed on a basis roughly of marginal cost, and the same uniform rate was paid to all producers.

In the iron and steel trade at large some slight movement toward pooling was made. It took place, however, not through any direct government action, but by an undertaking on the part of the integrated producers that they would have regard for some of the more refined branches of the iron and steel trade which bought and used the crude material cold, and would rescue these from the necessity of paying the full marginal cost price for their raw material in every case and of then charging it against the government in the price of their own finished product. The tentative and informal arrangements made with this object in view, however, could hardly be said to constitute a pooling arrangement; they were but an acknowledgment of the desirability of maintaining full output without the payment in all cases of the very utmost marginal cost.

Quite a different question of general principle was raised before the Price-Fixing Committee by the contention that in fixing the maximum price for any one commodity regard should be paid to the general price level and the general advance of prices. In effect the proposal was that there should be some equalization of inflation. Many prices had gone up 50 per cent or 100 per cent; why should not our article go up as much? Lumber had advanced less than iron and steel, sugar less than wheat and corn. Elaborate figures were presented to show that a thousand feet of lumber could in 1918 buy less of steel, wheat, copper, wool, than the same lumber could have bought in 1914. Was there not an obvious injustice to the lumber producers?

The argument was never pressed so far, or with such insistence on the equity of treating all quite alike, as to urge that every seller should get as much as any other — a percentage increase as high as the highest anywhere. So pressed, it would have been easily met by a

reductio ad absurdum. But it was argued that fair treatment would be secured only if some sort of regard were paid to the general price level — if no one commodity were permitted to lag very much behind the general run.

No set answer was ever given to this contention. Indeed, in the official rulings and pronouncements, general reasoning of any sort was little in evidence. But the argument was given little countenance, and by implication was set aside. Each industry was treated by itself, quite in opportunist fashion. Specific evidence on advances in materials and wages and on ascertainable or presumable profits was taken into consideration; but what might be happening in other industries was regarded as quite an independent story.

This negative or non-committal attitude was not only cautious and therein shrewd, but doubtless was intrinsically sound. The assumption that all prices should or might reasonably rise as much as the general level would have been equivalent to assuming that under normal conditions, in the absence of inflation, all prices would also conform to a general mean or average. In fact they show infinite variety of rise and fall. There would be no conformity to normal relations if these familiar diversities were smoothed out in a period of inflation. It was wise to consider each industry and each commodity by itself. As the general upward movement reached the materials and the labor of the particular industry, the rise was reflected in the cost figures submitted, and was duly considered in settling the maximum price. If not so reflected, let that price lag behind the general advance. In times of general price stability, under similar conditions of production and demand, the price of such a commodity would presumably have fallen.

There was indeed a conceivable case in which a different treatment might have been fairly asked: namely

one in which the materials and labor for the given industry were in a tight compartment, not affected by outside conditions and not responsive to the pervading influences except as they affected the final products of that industry. Then indeed the cost items for the particular industry could advance only if the product itself should previously advance. A sort of impasse would have resulted — "costs" could not be advanced until price of materials and labor rose, and yet these costs could not rise if government regulation interposed a veto on an advance in the article produced. But no such case was presented for settlement, not even one approximating these exceptional conditions. In fact, it was alleged throughout that the advances in wages and in materials, so far from being confined to one industry or one locality, were general and pervasive. They were forced on the producers by competition from without. In other words, the forces leading to inflation were at work on all sides, and showed their effects everywhere in rising wages and in rising prices of purchased materials. Hence the general advance was necessarily considered, so far as it needed to be or ought to have been, when due consideration was given to cost and profit figures.

As appears from this survey, government price-fixing during the war was not uniform in its objects, and was little guided by principles or deliberate policies. In the main it was opportunist, feeling its way from case to case. The Food Administration had indeed clearly defined objects, yet hardly a clear formulation of the principles to be followed in striving to attain them. The Fuel Administration, dealing as it did with a single commodity of well marked type, was able to proceed with most system and method. The use by it of the

marginal or bulk line principle was deliberate and consistent. The Price-Fixing Committee, whose wide range of operations might make its doings of most general interest to economists, was slowest in developing a general policy; and this probably for the very reason that its scope was wide, its principles of action little prescribed by any legislative or administrative instructions. What has been said in the preceding pages about the application of the marginal principle by the Price-Fixing Committee probably states its policy with greater sharpness of definition than is warranted by the actual decisions or formulations. There was no more than a gradual and tentative approach to any principle of action whatever. This restraint was as wise as that of a court of law which refuses to commit itself on any questions of principle not essential to the case in hand. Had the war continued, and had the regulation of industry lasted longer and extended farther, all sorts of new situations and new problems would have arisen, for whose wise disposal no rule could be laid down in advance.

Regulation came to an end almost immediately after the conclusion of the armistice. The War Industries Board in general terminated its restrictions and prescriptions as promptly as possible, and the Price-Fixing Committee did the same. No new price agreements were made after the armistice, and those in effect were allowed to lapse as they expired. In almost all cases, prices had been fixed for periods of three months; and as each such period came to its close, no further action was taken, and thereafter the free play of market dealings again set in. Most of the agreements terminated late in December, 1918, or on January 1, 1919; a few held over for a month or two into 1919.

Whether price-fixing would have completely broken down under greater tasks and greater strain, it would be rash to say. Perhaps forces would have been encountered, of the kind termed "economic," or perhaps of a kind not included in the usual economic list, such as to defy attempts at regulation and to confirm the predictions of those who believed that all regulation must come to naught. The experiment, if such it can be called, was not carried through to the end, or with system or consistency; and the lessons it yields are accordingly far from conclusive as regards fundamentals, and are qualified even within the limited range to which they apply.

So far as the experiment went, and so long as it lasted, the outcome seems to me to have been good. The rise of prices to be expected from inflation of the circulating medium was not prevented; but then no endeavor was made to achieve this sweeping object. There is nothing in all the price experiences to prove or disprove the contention that, irrespective of legislative or administrative fiat, general economic forces must work out their general effects. But that the impinging of the forces was in some degree affected and curbed seems undeniable. Food and fuel prices were prevented from fluctuating as widely and soaring as high as they would have done in the absence of regulation. A result of the same kind, and apparently not less in extent, was secured for other price-regulated articles. The traditional statement of economic formulae gives them an appearance of greater rigidity and sharpness than is warranted by the premises on which they rest. Supply and demand, monetary principles and monetary laws, are customarily formulated in exact terms, with an appearance of mathematical sharpness. The qualifications which must attach to these "laws" in any concrete application or

predication, familiar to the well-trained economist, leave abundant room for some exercise of restraining and deliberated action. No doubt there are limits to which such action must be confined; but they are not narrow limits, and within them much was done which proved of advantage to the country.

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THE BURDEN OF WAR AND FUTURE GENERATIONS

SUMMARY

Burdens of war are objective and subjective, 242. — Costs resulting from destruction, and cost of maintaining the fighting forces, 243. — Choice between rival ways of financing a war, 245. — Different effects of the levy plan and the loan plan, 247. — The assumed burden of a loan to the lender, 249. — Subjective burdens of levy and loan methods, 252. — Conclusion, 254.

I HAVE been invited to contribute to the *Quarterly Journal of Economics* an article on how far and in what sense the burden of the war can be shifted on to future generations. This question is one of practical as well as theoretical importance and I welcome the opportunity of examining it. Some of the issues involved are, indeed, obvious, but others have been the subject of controversy. A part of the difficulty has arisen out of an ambiguity in the meaning of the term "burden": for that term may be interpreted either *objectively* as a cost in things and services, or *subjectively* as a cost in satisfactions. In the following pages I shall endeavor, keeping this distinction in mind, to set out the whole problem in a logical order.

The objective burden which future generations bear as the result of a war is measured by the difference between their actual economic situation and the situation which they would have enjoyed if all other things had been equal and no war had occurred. This difference in economic situation, interpreted in the broadest sense, will, for any country, take account of the indirect effect of war casualties upon the quantity and quality of the population of which future generations are composed.

For the present purpose, however, a somewhat narrower interpretation is more convenient, and I propose, leaving the difference made in the people themselves out of account, to consider only the difference made to their economic environment.

The real costs of war to a country include two parts, the destruction wrought in it or in its possessions by the enemy and the resources devoted by the country itself to the conduct of the war. The former of these groups includes in an invaded country all the wreckage done to houses and furniture and roads and land; in an uninvaded country the results of bombardment from sea and air and the destruction and damage done to shipping. The latter group includes the whole body of effort wrought by men laboring in conjunction with equipment to supply the sinews of war, together with the existing capital stock actually used up in the war, e.g., trees cut down, railway lines torn up, rolling stock sent to the front and destroyed there and so forth. In a country which is in contact and communication with the rest of the world yet other elements will be involved. For the government of that nation may, for the purposes of the war, borrow either from the governments of other nations or from individual foreigners, and, even when the government does not so borrow, private persons in the warring countries, in order to provide their contributions, whether of loans or taxes, to the government may do this; or, if they do not actually borrow from foreigners, they may do what is substantially the same thing by selling foreign securities or other marketable possessions formerly held by them to foreigners and using the proceeds for the war. Finally, the government or private persons may ship abroad gold for the purchase of war material thus depleting the gold reserves of the country.

These various costs are in part, but only in part, represented in a deterioration below the standard which it would otherwise have attained in the economic environment of the future: because, to meet them resources are obtained, not only by drawing upon that environment, but also in other ways. When so many factories and houses have been destroyed by enemy action, so much of a country's forests cut down, so much labor and capital diverted from making and maintaining industrial equipment, so much foreign borrowing undertaken, this inventory of cost is not equivalent to an inventory of objective burden thrown upon the future. Broadly speaking we may say that, in so far as the costs of war are met in ways other than the provision of extra work by the war-waging generation and the undertaking by them of unusual economies in personal consumption, these costs are thrown upon the future — it being understood that, against these costs the future is likely to have left to it certain durable forms of industrial equipment which were made for war purposes but remain and are useful also in peace. We cannot, however, make the converse statement that, in so far as war costs are met by extra work or unusual personal economies they are not thrown upon the future, because this extra work and reduced consumption is likely, by wearing out the efficiency of the present generation to reduce the contribution which it is able to make to production, and therefore, *inter alia*, to the capital equipment available for future generations. How far this sort of reaction will go must vary, of course, with different classes of people: — extra work for those who normally work hard and diminished consumption for those who already live sparingly will have a much larger effect than extra work for normal idlers and reduced consumption for gourmands and pleasure-seekers. The general conclusion

must be that costs met in these ways (and of course this holds good whether they are so met during the actual course of the war or during the period of reconstruction immediately following it) are partly thrown by an indirect process on the future. On the whole, however, they are likely to be so thrown in a much less degree than costs which are met in the other ways described in preceding paragraphs. Hence the greater the extent to which war costs are met by extra work and personal economies the smaller the extent to which future generations are likely to be burdened by them.

The choice between rival ways of meeting war costs, and therefore the extent of the objective burden on future generations, is influenced by a number of important factors wholly independent of the financial policy pursued by the government. Among these are the strategic position of the country and, therefore, the physical power of its citizens to borrow from abroad, the extent to which its citizens hold securities saleable in a foreign market, the extent to which there is labor power in the country which normally is leisured or not fully occupied, and the willingness of the people to stint their personal comfort and enjoyment for a public end. These factors call for no special comment. Let us suppose that in respect of all of them the conditions are given. On that assumption a very important question has to be faced, namely, what difference will be made to the sources from which war costs are met, and therefore to the objective burden thrown on future generations by the policy which the government chooses to pursue. The foreign borrowing undertaken by it we may suppose to be determined by military considerations — foreign loans constituting a kind of extra over and above what it can get out of its own people — which lie outside our purview; and attention may, therefore, be con-

fined to the choice between various sorts of domestic taxes and domestic loans.

There is a distinction of some importance between the *nominal subject* and the *real subject* of a levy, whether the levy be by way of taxation or of loan. The nominal subject is, of course, the man from whom the money is actually taken over by the state. In so far as this man cuts down charities or presents or wages (while retaining the same staff) to provide this money, he is not, however, the real subject. For he simply transfers the obligation of meeting the call involved in the levy on to somebody else. This somebody else is the real subject of the levy: the nominal subject is the real subject only when he furnishes the funds required otherwise than by transferring the obligation away from himself. It is thus plain that it is the conduct of the real and not of the nominal subject that is of interest from the present point of view. Every one knows that the levy of £100 will have different direct effects when it is made from different real subjects. Taken from one, it will cause him to work harder; from another it will check personal consumption; from another it will check investment; from another it will cause him to let his plant run down a little; and so on. Now different methods of war finance involve different distributions of war charges, and it would, therefore, seem that we should be able, by analyzing their distributions, to trace out their respective consequences upon the position of future generations. The beginning of this investigation looks prosperous enough. Thus we know that the poor can at the best of times save very little; and they have no plant to keep up. Consequently war levies exacted from them practically must be provided out of extra work and extra personal economies. Unfortunately, however, it is just among the poor that resort to these methods is specially

likely to react on efficiency and so injure productive power. This reaction *may* in the end hit future generations, by indirectly lowering productive equipment, as much as an equivalent levy on better-off persons, part of whose contributions would come out of funds destined to be turned into material capital, would do. There is no getting over this difficulty. In consequence of it, we cannot, I think, lay down any broad distinction between different methods of war finance which will enable us to say that one method is likely, on account of its distributional reactions to involve more or less objective burden to future generations than another method.

We must not, however, stop at this negative conclusion. Various methods of war finance do not differ solely on the side of distribution. We have still to contrast the consequences of taking £1,000 from a man by way of loan and taking exactly the same sum from the same man in the form of a tax levy. If this man were a representative man and there was no such thing as economic friction, the choice between the two plans would be indifferent to him. If the money is taken in a levy the man loses it outright; if it is taken as a loan he is promised £50 a year on it, but knows that he will have to provide the £50 himself in extra future taxes. True, it may be said, if he is confronted by an emergency, and has a £1,000 war bond, he will be able to sell it and turn it into ready money at the cost of being £50 a year poorer afterwards. But, in the absence of economic friction, he would, in a like emergency, if he did not possess the war bond, be able to borrow £1,000, also at the cost of being £50 a year poorer afterwards. This argument is valid in the abstract. But, of course, in actual life economic friction is a real thing and a man cannot borrow £1,000, unless he happens to have good

collateral, with anything like the ease that he can sell a £1,000 war bond. Therefore, as a matter of fact, if there is a chance of emergency, it is a real advantage to have a £1,000 war bond even tho the whole of the interest one gets on it is paid by oneself. Moreover, besides this real advantage of loans over taxes to the persons who furnish the money there is also an imaginary advantage: for it will not generally occur to those persons, even tho it were exactly and demonstrably true, that they will themselves have to pay individually the interest they individually receive. Consequently, they will certainly *feel* better off under the loan plan than under the tax plan, and are, therefore, likely to provide what they do provide more largely by cutting down investment and less largely by extra work and economies in personal consumption than they would have done under that plan. To this extent, therefore, the loan plan, in so far as the money is raised from the better-to-do classes, will react on the sources from which war costs come in a way that involves a larger objective burden on future generations than would be imposed upon them under the tax plan.

And there is yet a further point. The argument of the preceding paragraph proceeded on the assumption that the people who provide money under war loans are so situated that, after the war their taxes (so far as required to finance war debt) and their loan interest are expected to be equal. As a matter of fact, however, experience has never yet revealed a tax system anything like as strongly graduated for increasing incomes as loan subscriptions are normally found to be, at all events when the loan required is large. Hence, the richer classes, from whom, when a large amount of money is wanted, contributions under any plan *must* chiefly come, will think, and rightly think, that a loan hits them much less

severely than an equivalent levy would do. Hence the inducement to work harder and to effect personal economies in consumption will be correspondingly less, and they will be more inclined to rely in one way or another upon draughts on real capital. It is true that the poorer classes, with the prospect of heavy taxation before them will, if they understand the situation, realize that under the loan plan they will be hit more severely than under the levy plan; and that, therefore, they should tend to work harder and economize more. It is plain, however, that in practice this tendency will work very much less strongly than the converse tendency among the rich, while, even in so far as it does work, its consequences are ambiguous because of the damage likely to be done to the productive efficiency of those affected. On the whole there can be no doubt that under the loan plan capital resources will be more seriously depleted, and future generations, therefore, more seriously burdened than under the levy plan.

I now pass to a further problem. Let us suppose that full account has been taken of the difference between the effects of the levy plan and the loan plan upon the conduct of the persons affected during the war, and of the way in which this difference is reflected in the direct objective burden borne by future generations. Does the choice between the two plans involve any further difference over and above this in the amount of that direct objective burden? In answering this question it is well to distinguish between the payment of interest on the war debt and the repayment of principal through a sinking fund. So far as interest is concerned, it is obvious that what is taken from the income of tax-payers in taxes goes into the income of holders of war loan, and that, therefore, all that happens is a transfer of income from one section of the community to another section,

and, in so far as tax-payers and war loan holders are identical, from one pocket to another pocket in the same coat. Plainly in a transfer of this kind it is impossible that any *direct objective burden* — I am not at present concerned with other sorts of burden — can be involved. There remains the money raised for repayment of principal through a sinking fund. As regards this it has been claimed by certain writers that the preceding argument is inapplicable. They reason that, when a holder of war loan has the principal of his loan paid off by the government, he receives no benefit, but is simply left in his old position — possibly a slightly worse position, because he will have the trouble of finding a new investment — and that, therefore, there is nothing to set against the objective burden thrown on the tax-payer in the form of taxation to provide the money to pay him. Professor Seligman writes: "The fallacy involved in the contention that the sacrifice imposed upon the future tax-payer is counter-balanced by the benefit accruing to the bondholder consists in the failure to realize that there are no benefits thus accruing to the bondholder."¹ Professor Scott arrives by similar reasoning at the same conclusion: "Speaking quite generally, the effect of a loan (he is discussing an internal loan) is that posterity is rendered liable to do the amount of work which is necessary to pay it off."² The substance of this argument is that, since, in the main, repayments of principal made to holders of war loan are certain to be reinvested, posterity as a whole will be forced by the process of debt repayment to create new capital, and so to refrain from consumption, to approximately the extent of the debt repayments. Let us provisionally accept this presentation of the facts. Even so to suggest, as the language

¹ *Annals of the American Academy*, January, 1918, p. 64.

² *Economic Journal*, September, 1918, p. 258.

used by Professors Seligman and Scott seems to do, that they imply a *direct objective burden* on posterity equal to the amount of the debt repayment is paradoxical in the extreme. Posterity will possess the new capital which it has been induced by the fiscal expedients of the state to create. What right have we to ignore this possession? To do so is as tho one should say that a man who has been induced by circumstances to put £100,000 into a factory instead of into a yacht or a bean feast was thereby made poorer to the extent of £100,000 than he would otherwise have been. If there were reason to suppose that the world would end immediately after the investment had been made, there would indeed be something to be said for this view. But at present no cosmical catastrophe is in sight and posterity may be expected to reap the fruit of its investments in the same way as its ancestors. Thus, tho it is true, as Professor Seligman asserts, that the bondholder gets no benefit from debt repayment, it is also true that the tax-payer suffers no loss. What he in effect does is to make an investment of certain funds, the proceeds of which will serve in future years to keep the bondholders' position intact without any further call upon the tax-payer himself being required. On posterity as a whole no *direct objective burden* is imposed by debt repayment of an internal loan, any more than by payment of interest upon it.

We may conclude therefore that, apart from the consequences produced through reaction on the conduct of the persons affected at the time, the choice between the levy and the loan method makes no difference to the direct objective burden thrown on future generations. The payment of interest and the repayment of principal alike are transfers, not costs, and to whatever there is somewhere lost there corresponds elsewhere an exactly equivalent objective gain. It does not, however, follow

from this that no difference is made by the choice between the two methods in the *subjective burden* borne by future generations. There is reason to believe that it is of this rather than of the *objective burden* that both Professor Seligman and Professor Scott are really thinking — tho to interpret them so involves a rather generous straining of their language — when they claim that the need to repay internal war debt throws a real burden upon posterity. Let us, therefore, consider the effects upon subjective burden. To simplify the discussion I shall begin by studying a representative man so situated that what he pays in taxes to finance the debt exactly corresponds to what he receives in interest and in repayment of the principal of his war loan holdings. In these circumstances it is obvious that the interest money merely comes out of one pocket and goes into another, and that a subjective burden is excluded as completely as an objective one. But with the part of the tax used to repay principal the position is a little different. In effect £100 has been taken from our representative man in taxes and then paid back to him as a price for cancelling his £100 war bond. If this procedure had not been gone through, this £100 would have remained in his disposable income and would, we may suppose, have been spent. As the procedure has been gone through, he realizes that, should he spend it, his "capital" will be £100 less than before and his future income therefore £5 less. He will, therefore, it would seem, need to save the greater part of that £100 and invest it so as to keep up his capital and conserve his future income; and this new need will obviously involve a real subjective burden. Such reasoning, however, ignores the fact that, tho if he does not save that £100, his future income will be £5 less, his future taxes, out of which his war loan interest is paid, will also be £5 less, since the £100

of war loan to provide interest on which the taxation is required has *ex hypothesi* been cancelled. When account is taken of this fact, it becomes apparent that the representative man's *net* income, after taxation has been deducted, will be exactly the same in the future as it has been in the past. His position as a whole, therefore, is not damaged in any way, and there is no reason why, to safeguard himself, he should save that £100 which he would normally have spent. It may perhaps be replied that the prospective escape from taxation will not balance the prospective loss of interest because he may reckon that, as general wealth increases, the amount of taxation which he personally will have to contribute will fall. But this reply is illicit, because he must be taken as a representative man whose wealth and (in his family) numbers expand in the same ratio as that of the whole community. A second possible reply — that the tax will fall through loan conversion — is obviously irrelevant since conversion would reduce loan interest equally with the taxation made to provide that interest. We may conclude, therefore, that, if he realizes the whole situation, the representative man will suffer no subjective burden in consequence of debt repayment. No doubt it is probable that in practice he will not realize the whole situation and will not perceive that his loss of capital is balanced by his saving of prospective taxation. So far as he fails to perceive this, he *will* be pushed into saving part of the £100 which he would normally have spent, and so *will* suffer a subjective burden. This appears to be the leaven of truth in Professor Seligman and Professor Scott's reasoning.

Naturally this is not a complete account of the position. For, in actual life, as I have urged strongly elsewhere,¹ when money is raised for a war, such a vast

¹ *The Economy and Finance of the War*, pp. 66 et seq.

amount is required that a very much larger proportion has to be taken from the rich — who have a wider margin — as compared with the poor that it is usual to take from them under normal taxes. When loans are employed, therefore, it is almost certain to happen in practice that the money raised afterwards to pay interest and repay principal upon them will be taken from the poor in much larger quantities than it is received by them. The annual transfer of resources to serve the war debt is thus in considerable measure a transfer from poorer persons to richer persons. Obviously that fact involves a large subjective burden to posterity as a whole; for the simple reason that a poor man is injured much more when a shilling is taken from him than a rich man is benefited when a shilling is given to him. This is, perhaps the chief practical objection to financing wars by internal loans to any greater extent than is absolutely necessary. But this element of subjective burden on future generations, tho it is almost certain to be associated in fact with the loan method, arises out of the way in which, as a matter of fact, governments choose to distribute normal taxes, and is not inherent in the method itself. In a purely abstract comparison between that method and the levy method, it should, therefore, be left out of account.

So far I have considered only the direct objective burden, and the subjective burden arising out of this, which is borne by future generations. It has to be added in conclusion that the loan method also strikes at the future in an indirect way. It does this because it involves in the future large and continuous taxation to provide funds for the service of the debt. The fact that taxes raised for this purpose represent merely a transfer and not a using-up of resources, does not warrant the inference that they are innocuous to production. On

the contrary, it is impossible to raise large sums of money by taxes which have to be continued year after year, and the impact of which, therefore, everybody anticipates and prepares for, without in one way or another hampering production, discouraging industry and driving capital and ability to seek investment elsewhere. The extent to which these things happen depends, of course, partly on the scale of taxation that is necessary, partly on the kind of taxes which the government chooses to impose, and partly on the comparative position of the particular country under review and other countries in the matter of tax rates. But to some extent they are practically certain to happen. In this way future generations will be hit by the aftermath of a policy of finance by loans. Nor can it be justly replied that a policy of finance by levies will hit them to an equal extent because it will discourage industry and drive capital away during the war itself, thus injuring the equipment which is left to the country after it. For, during a war, not only are special motives of patriotism at work to maintain industry and government restrictions to prevent the export of capital and brains; but also, wars being short, taxes levied in war time are not expected to continue as ordinary taxes are and are not capable, therefore, of reacting so strongly upon production. In any complete comparison of the effect upon future generations of financing war by levies or by loans a very important place must be assigned to this last element in the account.

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WAGE THEORY AND THEORIES

SUMMARY

Labor-purchase theory of wages, 256. — A Crusoe or collective analysis, 257; inapplicable for competitive purposes, 258; but invoking the selective working of the iron law, 261. — Property as affecting iron law, 262. — Predation and survival, 263. — Minima of living and death rate, standard of living and birth rate, as bearing on wages, 264. — Both the minimum and the standard doctrine are cost doctrines for the supply of men who have no costs of production, 265. — Bearing of numbers on per capita product, 268. — Flexibility of standards of living, 270. — Population limited by increasing product, 271. — The causal nexus, 272. — Wage-fund theory, 274. — Labor-pain theory, 278. — Productivity theories, 280; in ethical implications, 280; in distributive precision, 282. — Surplus-value theory, 286. — Reconstruction, 288. — Production in competitive meaning, 288. — No outlook for higher wages at expense of employers, 288. — Possible lines of amelioration, 289. — Institutional conditions and competitive processes as affecting (1) the distribuend, (2) the distribution rations, 291. — Conclusion, 297.

THE environment of the group is its habitat; of each individual, the habitat plus the other members of the group. For group purposes, therefore, human labor applies itself mainly to effecting desirable changes in the habitat and desirable responses from it. From the point of view of the individual the desirable results, the economic returns which he achieves, may accrue either from the habitat or from the other individuals — desirable results for him, irrespective of whether they are beneficial or desirable either for the habitat or for other individuals. In strict analysis also, it is possible from the point of view of the group to regard as economic production such results of human effort as achieve desirable modifications in the group or in members of the group, and to regard as productive from the individual

point of view such modifications of other individuals in the group as are desirable for the particular individual concerned.

Looked at in the large, therefore, and seen from the group point of view, it is not irrational to regard as a wage whatever returns nature awards to human effort. This view conceives of production as a sort of exchange process, almost a contractual relation, in which man as laborer serves the environment as employer — effort applied for product promised, labor performed against products returned. "Labor was the first price, the original purchase money that was paid for all things" in the barter between man and nature, a relation of *quid-pro-quo*, in which relation, however, the advantages accruing to the employer are not quite so obvious as those obtained by the employee.

For the isolated economy, at any rate, the essential relations in the case need not be misrepresented through this implicit personification of the environment. How the trade shall go off, and with what advantages to Crusoe as laborer, must, as obviously as rationally, be affected not merely by the vigor and seriousness of Crusoe's effort but also by the intelligence and skill by which Crusoe — not Crusoe's employer — is able to direct the effort. On the other hand, the quality of the environment will have much to say for the response that it makes — the benefits that are in prospect from it, the wages that it can furnish and pay. The greater the results achieved by Crusoe the higher obviously are the wages that the environment returns, it being taken to promise always the maximum wage possible of payment by it, in view of the results achieved within it and for it — the more for the laborer as he produces more, a perfect working out of the specifications of the productivity theory of distribution — if only, mark, it

could be safely assumed that the environment itself is always void of productive efficiency in its own behalf, and if therewith there could be any coöperating productive factors achieving together a joint product — and thus any distributive problem at all.

Nor is there any valid objection to this same manner of thinking as extended to cover any group economy taken as collectively organized. And thus it has happened that out of the biological fact that no more individuals of any species can live within any given habitat than the habitat can supply with nutriment, a law of wages has been deduced. In truth, the iron law of wages necessarily emerges so soon as it is assumed that there is no limit upon the reproduction of human beings other than the food limit or, it may be, than the raw material limit. But even so, the group supply of food, however scant, need not accrue through any sort of wage relation, or by virtue of any effort or sacrifice put forth or of any return received thereon. If only all competitive implications are rigorously excluded the product may be sheer gratuity. The traditional rats in the barn, considered as a group, need no more dig or delve than spin or weave. The group income is pure environmental bounty as distinguished from wages. But none the less this food limit remains the multiplication limit — the death rate finally equating against the birth rate in such fashion as to fix in permanent stability the number of individuals in the group.

But so soon as the group is regarded distributively, with a membership inevitably committed to the struggle for life, and as, therefore, competitive in its organization or its anarchy, all deductions from the group or collective point of view come promptly under question. The competitive hunt for food need not be taken to increase

in any slightest degree the aggregate provision of food; but the degree of energy and skill or the amount of time devoted by the different individuals to the quest will have much to say as to the distribution of the fixed volume of food available for consumption. The iron law will manifest itself no less relentlessly, but it will manifest itself selectively within the group. The death rate will doubtless rise to a point offsetting the birth rate, the return to effort becoming for certain individuals so meagre and the deaths so numerous as to equate the group death rate against the group birth rate. But the situation being competitive, it may still be true that the more vigorous or clever or industrious hunters in our rat colony may still prosper and still generously multiply — but this obviously only on terms of an offsetting limitation upon survivals among competing rivals or their offspring. The death rate still stands as the effective limit on numbers, but this not in the sense that the limit applies to the group as a whole, or applies equally to the different reproductive stocks or families within the group, or that it applies to more than a small share of the reproductive stocks. The process working competitively, it therefore works selectively. In some sort, truly, there is still a group margin of subsistence, but only in the sense that while some individuals or some reproductive stocks are indefinitely far removed from the margin, others are close to it, still others disappearing over it. The group margin therefore, means nothing more than that there are individuals enough meeting the limit of this margin to offset the reproductive increment from other individuals.

What follows then as to any specific rate of wages within the barn — as to some one rate of remuneration in food hunting? There is quite clearly no one wage return. The rats differ in their effectiveness in seeking

food. As mere restatement of this fact, therefore, it is possible to speak of a unit of return as accruing for each unit of hunting activity directed to the quest. Nor can any meaning attach here to the notion of skill or of effectiveness excepting as appealing for test to the results obtained — results not so much reporting as being the precise degree and precise expression of the skill or the effectiveness. In this view of the case also, the environment is taken to offer equal opportunities to all of the different hunter rats — to be entirely impartial — offering but one wage contract, that of payment according to the specific results achieved. Granted that the different rats differ in their particular adaptations to the opportunities that are open to all, this may readily for the purpose be interpreted as reporting different degrees of productive power within the existing situation. Impliedly always, therefore, there is denied any productivity in the environment itself. The productivity of each hunter is regarded as something inhering in him and attaching to his reactions upon the environment within which, and as limited by which, and as subject to which, his acquisitive activities function, rather than in any degree as attaching to the environment itself.

But further difficulties emerge with the assumption that the activities under consideration are not merely competitively acquisitive but are collectively productive — that the total food product at the disposal of the group as a whole is susceptible of increase by the industry or skill with which the response of the environment is solicited. That in such case the aggregate wage or each specific wage must rise need not, however, seriously put in issue the validity of the iron law for the determination of *certain of the wages* by the food limit, if only the processes of multiplication may be securely counted on to exhaust any temporary margin of food provision,

and if also it may be assumed that the mere fact of labor more prolonged or of skill more highly developed or of stress of effort or of industry more severely felt can carry with it no physical or psychological modifications affecting the tendency to multiply or the rate of multiplication or the distribution of the reproductive activities. If, however, the higher returns upon productive effort, or the stress and strain involved in this effort, or the institutional changes attaching to the methods or the results, may lower the birth rate — the birth rate, note, rather than the death rate — even more rapidly than the death rate is lowered, the net result may be a progressive diminution of population.

But, in any case, it must be clear that, under acutely restricted supplies of nutritive material, survival may be less a question of the product available for the different individuals than of the quantum of nutriment necessary for purposes of survival. It is easily possible that those individuals of the smallest productive efficiency and of smallest derivative returns in product may be precisely those individuals whose digestive and assimilative processes are relatively so efficient as to establish a selective advantage in the competition for survival.

Differential advantages of this sort, indeed, if they are not safely to be ascribed to certain individuals in our colony of rats, do quite obviously distinguish certain races of men. Under an age-long discipline of poverty, the Chinese appear to have evolved a human mechanism exceptionally economical of power relatively to the calories of nutriment absorbed in running it — animals of easy keep, machines astonishingly economical of fuel. There is, then, no secure principle of selection according to the mere test of productive efficiency under the

competitive wages allotted by a homogeneous and undifferentiated environment.

Still further influences bearing upon survivals within our rat colony must attend the establishment of institutions of private property, and especially of the institution of property in the inelastic items of the environment, with the concurrent emergence of habitat rents received as distributive shares out of the aggregate product of food. If that particular nook or corner in which the husbandman (or an overruling Providence) habitually stored his (His) grain, or each crack of escape through which the grain should generously trickle out of the bins, comes to be the particular range or station of certain especially fortunate rats, to be held or ranged over by tenant rats only on terms of generous tolls in favor of the consenting and leasing possessors under vested rights — a further selective principle in the determination of survivals is introduced. Certain individuals or classes will be institutionally withdrawn to indefinite distances from the death line. So far, then, from the selection approximating any general similarity to a group of average marginality between life and death, these more fortunate individuals will be the further removed from menace, as certain other of the race of rodents are approaching the nearer. The progressively rising rental incomes accruing to some individuals or classes will be a function of the progressively increasing rate of starvation among the others.

So, again, were there in this providently provided barn any considerable development of business as distinguished from industry — any class of receivers of nutriment who by social tests were not at the same time contributors — mere toll takers, redundant middlemen rats, tax farmers, popularizers of brands and styles,

advertising experts, engrossers and regraters, poison venders, blackmailers, thug or strong-arm rats, phrenologists, soothsayers, professors or priests of various magics — and so on indefinitely — it might be true that many of the rodents ethically best deserving to die, and by the test of social productivity least authorized to live, and institutionally most effective in creating selective margins of starvation for their fellows, might themselves be raising an increasingly generous progeny on the farthest horizon from the trenches of death.

Much more than the foregoing might presumably be securely written of the economic and distributive institutions, the productive and acquisitive activities, the reproductive tendencies and derivative wage conditions in this classical rat barn, if only one's knowledge in the premises were a bit less inadequate. But, in any case, for average or aggregate purposes, a certain degree of significance must be attached to the iron law of wages in any possible society, if only the quasi-biological assumption of an inevitable tendency to over-multiplication can be accepted as safely applicable. Nor is this assumption finally discredited in its application to human societies by the fact that, in the western world during recent centuries, wages have, with a fair degree of constancy, been more and more widely diverging from the subsistence limit — if all the while, this limit be interpreted as that minimum toll of food calories essential to human life or even as a general necessity limit which shall include clothing, food and shelter. It may still be true that the process of absorbing any margin or slack in production through an inevitable expansion of population is still in an intermediate stage of working itself out, and that only for this transitional period is the increase in the productivity of human labor

rapid enough to outstrip the tendencies toward those increasing numbers for which the high wages have made room. At all events, the recent centuries have been a period of more generous wages and of a widening margin of wages over the minimum necessities of existence.

But none the less have the obvious historical facts prompted a revised interpretation of the method by which wages are determined — an interpretation still directly connected with the tendency toward reproduction, but with a marked difference in emphasis. According to this later view, wages are not determined by the minimum necessities of living but rather by the actually established requirements of living — not by what human beings must have in order to maintain life and to rear replacing offspring, but rather by what they must have if they are to consent to marry — or perhaps to mate — and to rear children. The reproductive instinct, or the opportunity for it to function, must wait, it is asserted — or at any rate actually does wait — on the presence or promise of an adequate margin of income above the habitual requirements for individual living. This standard of living method of the fixation of wages, therefore, equally with the iron law of wages, appeals to a limitation in the number of human beings for its determinant. But under the earlier view, the numbers were to be fixed and wages established through the operation of the death rate. This later view places the limitation on the side of the birth rate. Consistently with this later view the standard of living comes to be defined as that habitual level of consumption any impairment of which will forbid, or at least will seriously restrict, reproduction. Wages must thus express, in terms of the standard of living, the actual conditions under which the population can be secure against a decrease due to the inadequacy of wages.

But it must now be emphasized that either of the foregoing theories, the standard of living theory not less than the minimum of subsistence theory, is in essentials a productivity theory of wage determination. Population tendencies are appealed to solely as fixing the setting within which productive effort is applied to a fixed and inelastic situation — to the conditions fixing the response of nature to human effort — the terms surrounding the exchange contract or the barter transaction between the environment as employer and the human being laboring for hire. The more men there are, the smaller, it is asserted, must be the average return to each. By implication, also, this general or average wage is not conceived as the general or average resultfulness of labor in terms of product but rather as the marginal productiveness of labor. As the number of laborers is increasing, wages fall to the effectiveness of the labor applied at the poorer and poorer opportunities offered by successive marginal qualities of land. In ultimate analysis, therefore, either doctrine is also a distributive doctrine. The better lands as they command rent have by implication attributed to them a productive efficiency by which the rent is to be explained, of which the rent is the competitive price, and through which it is expressed and reported.

Of the subsistence theory of wages, the iron law theory, it might perhaps also be asserted that it is not merely a productivity theory but at the same time also a cost theory of wages. Ultimately the return to labor is held to coincide in amount with the subsistence requirements necessary to the forthcoming of labor. This cost emphasis is, however, more clearly marked with the standard of living theory, in which the factor of consent is more definitely and consciously present. Not only must the wages be high enough to indemnify the cost of

the rearing and the maintaining of any given supply of labor, but also the wages cannot long rule higher than this cost. What the laborers insist on having in wages, as the minimum return at which they will reproduce and maintain their numbers, is therefore at the same time both the lower and the upper limit of what they will get.

Nor are competitive cost analogies lacking for this view. As the price of wheat or pork is in the long run commensurate with the supply costs — as horses and slaves must tend in price to the level of the terms of cost under which they may be produced — as slave hires equally with horse hires or machine hires rest ultimately on a cost determination, so labor hires, it is held, are finally to be explained in conformity with the same cost analysis. In all these cases the supply cost is held to bear on the market rates of remuneration solely through the effect of the changing cost to change the supply, and thereby to change the price terms on which the entire supply can find renters or employers. The agricultural employers' outlay in wages is limited by the environment's marginal response in salable returns. Thus the marginal standard of living reported in the wage is equated against the marginal price returns of food product, within an environment of diminishing response to productive outlay invested in human labor. The standard of living theory of wages is then both a supply, or a cost theory, and a demand, or a productivity theory; the cost determining the supply of labor reacts to fix the product of it.

But there are certain difficulties:

(1) It is not obvious that the supply of men comes about in ways and under influences similar to those effective for wheat or horses or slaves or machines. Child rearing is not now commonly and typically entered into

as a pecuniary enterprise — if indeed it anywhere now is or ever were so. It is unlikely to pay from any pecuniary point of view. And even did it pay, the returns do not accrue to the investor. In most cases the parents advance the costs without prospect or expectation of any sometime indemnity in price return. And commonly the children collect their wages quit of any purpose, bond, or promise of indemnifying the parental advances. Doubtless in some countries and on some levels of life exceptions are to be found. But the general rule holds. And even were this not the general but only the exceptional case, the difficulties in the cost determination of wages would be logically not the less serious. The truth is, that on the side neither of the parents nor of the children can the psychology or the methods or the computations be those of enterprise or of business or of pecuniary gain. Even less than marriage can the rearing of children be held to take place always or generally as a business undertaking or as promising or affording justification by this test. No cost of production computation, no balancing of pecuniary debits against expected credits of indemnity or of prospects of surplus is either actual or humanly credible. The essential facts of entrepreneurship, of private initiative for private gain, are absent. Even could the thing pay — as possibly sometimes it does — it could rarely or never find its actual motivation in the prospect of paying. The pecuniary calculus does not apply — cost of production at best a remote analogy, and always or generally a myth. The attractions of sex, the desire for children and the instinctive urge of the reproductive process are not business items, or data in any business process or gainful enterprise. If slave breeding matured only free slaves, if poultry raising afforded only birds prompt to fly away at the beginning of their earning period, if

wheat farming matured crops solely for the neighbor's granaries, the processes involved might conceivably continue, but hardly as within the categories of business, of cost accounting and of cost analysis, or as affording results substantially similar. Widow Malloy, famous in song, who could commend her daughter's aspiration to learn to swim only on condition that she avoid getting wet, was toward her son wise and sane in economic affairs beyond most men of learning.

I've sixteen children, Pat, said she
Whom God unto me has sent;
But children ain't like pigs you know,
And I cannot pay the rent.

(2) Nor is it quite obvious that an increase in the supply of labor must lower the wages of labor. The analogies from consumption goods — hats or houses or horses — is not convincing. To production goods the notion of falling prices with larger supplies does not safely apply. Even with consumption goods it is valid only for those particular goods that are increasing disproportionately with other goods. If the increase in goods is general, exchange relations need not be disturbed by supply influences. If, also, laborers of all the different sorts were increasing in supply not more rapidly than the complementary factors, there is no reason why the wage of any kind of labor should either fall or rise. Thus the assumption of a general fall in wages with larger supplies of labor rests on the concurrent assumption that there is an increasing relative scarcity of the equipment complementary to it — commonly upon the assumption of increasingly inadequate supplies of land — and especially and particularly of food-producing lands, inclusive of food-producing waters. There is obviously no warrant for supposing that with increasing numbers of men the aggregate product must

be stable, but only that with population advancing to lower land margins, the increase in product will not be proportional to the increase in laborers. But, in any case, this situation need involve no very serious fall in the per capita product, and therefore no serious reduction in the level of wages, unless the land rent share of the product is growing rapidly greater. The expected serious fall in wages must, then, appeal as much to the distributive influences apportioning the product as to an expected reduction in the average or per capita product, and must, therefore, take for granted conditions of land supply seriously restricting the increments of product attendant upon increasing supplies of labor.

This assumption, however, of a falling margin of cultivation with expanding population may or may not be justified. Whether with good or with poor land, there may be large areas of either, without marked differentials of fertility in the actual supply. Doubtless the countries of western Europe have furnished examples of populations far outrunning the supplies of high grade land, and cultivating land areas grading sharply downward in point of returns under the actual conditions of agricultural technique. Whether by extensive or by intensive exploitation of the lowering grades of serviceability, the food return determining the wages possible to marginal exploitation must rapidly fall with the advancing pressure for food — prices on foods advance rapidly relatively to the prices of other commodities — rents rise to the great advantage of the land-owning classes, and wages fall, especially in terms of command over nutriment, to the extreme disadvantage of the wage-earning classes. But Asia, eastern Europe and the two Americas with other land conditions might easily have developed other wage tendencies and afforded occasion for other wage doctrines.

But still there is no serious warrant for the belief that standards of living must remain firm against the pressure of the reproductive tendencies. Only when, by definition, the standard itself connotes those things which an increasing family will not be allowed to displace or limit, is the doctrine beyond attack. Standards of living actually do fall, as under other conditions they rise, without the disappearance of the race or the particular class concerned. The birth rate may modify the standards as readily as the standards the birth rate. And not rarely is it true that the lower the standard falls the higher may the birth rate rise — the standard lower because of the higher birth rate, the birth rate rising because of the lower standard — to the point where the rising death rate sets a limit to the further increase in numbers or to the further fall of the standard — thereby effectively illustrating the occasional validity of the forecasts on which the iron law — duly annotated, as we have seen — may occasionally validly rest.

Not rarely also, as typically with (a) what are called the Anglo-Saxon races, (b) under a competitive organization, (c) in the temperate zone, (d) at this particular stage of institutional development, tendencies are seemingly becoming manifest, that are seriously disturbing both to the pessimism of the iron law doctrine and to the optimism of the standard doctrine. For not only does a higher level of economic well-being commonly fail to stimulate a higher birth rate, with wages relapsing to a new equilibrium between poverty and death, but instead, a higher efficiency in production with the better wages that attend it appears to diminish rather than to increase the births, to establish in turn a standard of living consenting to fewer children and permissive of still wider alternative gratifications — to the point of putting in question whether there may be any modern

society, retaining its competitive institutions of consumption as well as of production and distribution, that is not well on its way to disappearance as a racial stock. For it is the wealthy nations that manifest the lowest birth rates, and the wealthiest classes of each nation the lowest rate of that nation, so that, despite the falling death rate, both nation and class present a deficit of maturities that is offset only by immigration or possibly by the special fecundity of the newly arrived stocks.

So far, then, there appears to be little validity attaching to either the minimum of subsistence or the standard of living theory in the fixation of wages, except so far as either may be taken to point to the possible effect of changing numbers to modify the conditions under which productivity is determined — in substance therefore, a productivity theory of wages, *distributively annotated* to take account of the distributive process under unfair distributive institutions, and working out into a dubiously beneficent selective process.

But there are other methods by which to equate the wages with the standard of living. Not rarely was it held in classical thought that, if corn rises, wages must therewith follow in rise — not agricultural wages alone, with a possible productivity explanation — but wages in general. For, it was urged, if the laborers did not get wages enough to live on they would die — an outcome, obviously, in which no economist could acquiesce. ^{¶¶}A man must live. Even if the employer cannot see this, the economist can. Sometimes, of course, there [¶]are famines; but these must stand as cases in which the economic law fails to hold — exceptions proving [¶]the rule. Most people do finally die of something else than starvation, as obviously they could not, were it not for

the economic law prohibiting in general all deaths from starvation. If recurrently hordes of people die in India for lack of food, this fact should rightly argue the prevalence of bad economic doctrines in India. So, again, that wages are low in Europe has been explained by the low standard of living there — the higher wages in America, by the fact that we in America have come into the habit of consuming more, so that now we have to have it. Thus, again, it is notorious that women get lower wages than men because the women can live on less, or need less, or are helped out by home supplementation, or have their theatre tickets furnished them by their escorts. And thus it follows that if the Chinese or the Japs get into America they will spoil our wages by their low standards of living.

But, however these things may be, it is certain that high wages and high standards go together. As to the causal connection between them, it suffices for the doctrine under consideration, as proof that the standards cause the wages, to recall that if the wages are not forthcoming, the laborers will protest, get discontented or discourteous, appeal to the legislature, or strike or riot. Something, it is clear, will have to give way. Land rents, it should follow, might also be higher if the land owners possessed equally good vocal capacities and were disposed to use them in the proper emphasis. Slaves that talk menacingly, and on occasion rebel, should be expected to command the maximum prices; so horses that bite and kick and balk if they are not properly fed should bring especially good prices and be especially well fed. The necessary thing to get wages up is merely to raise them. If the railroad men get more, other laborers will feel that they want more, and in this way may be expected to get more. The standard of living thus rising by particulars, it is always the easier to get

it and the inadequate wages higher in the general. Clearly enough, each employer can afford to pay if all the others have to. The easy secret of high wages is in legislation, if the laborers themselves are unwisely slow in raising their standards of living and in formulating the demands which these standards will justify and enforce. Either method of starting will equally well suffice — whether by the wages that establish the standard or by the standard that fixes the wages. But the best point at which to initiate the program is with the minimum wage — thus getting the wedge in at the bottom where it will raise everything. And indirectly, of course, under the rising general standards of well-being and of imperative requirement, the profits of employers will also feel the uplift; interest will rise with the better recognized necessities of the creditor class; and finally also, the landlords, needing more income, can reasonably look for higher rents. Stupid was it that a practical application of this principle had to wait for so many decades after classical authority had announced it.¹

¹ "There is one point with respect to which economic science, in spite of much vacillation and many misconceptions, has in the main been fairly consistent from the early days of scientific writing down to the present. This is the principle that the rate of wages rests on the traditional standard of living proper to the persons concerned. . . . Advance . . . consists simply in a recognition of the fact that the natural price is measured by a moral standard." Gustav Cohn, *Science of Finance*, Veblen's translation, p. 259.

"The difference between the advance of relative wages in the two sections of the north was in large measure due to the unlike changes in relative cost of living. . . . Our general hypothesis is that the rise of wages was due chiefly to the increased cost of living. . . . On the average, a single man is better off . . . on a wage of, say, 75 cents a day than a man of family on a wage of, say, \$1.25 a day. If this be so, there is the same reason why men in the first of our groups should receive a less average increase in money wages. . . . Similar considerations explain why on the whole the wages of women increased less than the wages of men." Wesley Clair Mitchell, *History of the Greenbacks*, pp. 306-347, *passim*. The argument is that since wages and expenditure go along together, the expenditure determines the wages.

"The degree in which women workers may be receiving assistance from their families or other sources is a very important factor in the industrial world, for to the extent that such workers are having their regular wage supplemented by outside assistance, they are able to offer their services in the labor market at lower rates than are workers entirely dependent on their own resources. The most frequent example of this sort of

A somewhat similar tracing of the lines of causation underlay the wage fund theory of the forces fixing the remunerations of labor. Always the total of the wages received by laborers is precisely as large as the capital funds destined to their employment. Wages, therefore, are expected to rise with the more abundant capital of the employers, if only at the same time the laborers themselves do not improvidently multiply. If the employing classes have larger capitals, they can, and in wise policy they will, apportion a correspondingly larger fund to the payment of wages. Thus the welfare of labor is held to depend primarily on the growth of those capital funds in society by which the laborers may be employed, and, secondarily, on the restriction of the numbers of the laborers, through less rapid multiplication or through immigration.

In fact, obviously, this wage fund doctrine made large account of population tendencies and thus afforded further support to the Malthusian tradition. It is susceptible, doubtless, of being interpreted not so much as an account of casual sequences as merely of necessary mathematical relations; what the average laborer can be paid reports the total of wages divided by the number of laborers — the fund to be paid out in wages precisely equal to the funds received as wages. Likewise, a generous reading of certain later wage doctrines into a formulation really innocent of any implications of the sort, might serve to interpret the wage fund theory into some one or another form of the productivity theory. Why was the wage fund thus generous or thus grievously

subsidised labor is that of girls living at home and receiving board and lodging free or at nominal rates. . . . Many parasitic industries and trades have been able to live and even to achieve much prosperity on the subsidies contributed by working women. . . . Industries or occupations, if such there be, which cannot live except on the subsidies from family incomes contributed by exploited women and child workers, ought to die — the sooner the better, for the nation and the world at large." Monthly Review of the Bureau of Labor Statistics, January, 1918, pp. 5, 7.

restricted? Was it that the employers had on hand a certain amount of "capital" — fluid funds, that they were desirous of parting with — revenues for which they had no more satisfactory method of distribution than to pass them over to whatever men there were of a creditable willingness to labor and needy of money? But, more probably, what these competing employers were disposed to pay out would tend to reflect in close approximation the results which the labor promised — coming events casting shadows before — gains in prospect motivating present investment.

But even so, and interpreted as a productivity doctrine, some process of imputation is necessary on the part of the employer — a preliminary distributive appraisal of the items of labor in their marginal significance as coöperating and contributory factors of production, taken in their relation to other productive factors, so that employers should be able to find the limits of their wage offers.

In still another interpretation, the wage fund theory is allied with the doctrine that it is only through capital that labor receives employment. And this doctrine, in turn, subdivides into the notion (a) that in industry as well as in business, the initiative and leadership attach to capital, (b) that capital subsists labor during the gain, or the production period, and (c) that the effectiveness of labor in gainful employment, and therefore its wage, must be determined by its equipment — the tools and the implementation with which it is capitalistically fitted out.

Later theory would, however, pronounce that the directive and initiative function is not with the capitalist but rather with the entrepreneur — the functions of the entrepreneur as employer being as clear with reference to capital or land as to labor — his costs including

capital hires equally with labor hires — all his expenses of production paid out of capital, whether his own or borrowed. To set up an employer is not to determine the wages he pays by the capital he owns or can borrow, whether this capital exist in the form of funds or of machines or of land.

That labor is subsisted by capital may be tentatively admitted, without the implication that it is by the capital of the employer; perhaps it is by the laborer's own capital. Lawyers and doctors also must often wait long for their fees — sometimes without term. Laborers may or may not be paid in advance of the marketing of their products. But certain it is that commonly they are paid appreciably later than the services were rendered. And, in any case, if the subsistence goods are the *capital* under analysis, the employer is rarely possessed of any of these goods of subsistence; instead it is the merchant that makes the advances, as is sufficiently indicated by the number of his poor accounts to go to swell the bills against those customers from whom he does actually succeed in collecting. If the laborer is to live, he, doubtless, like all others who live, must live on the comestibles and in the houses and on the lands that are in existence. But even tho these be not his own, there is no evidence that they are the capitalist's or that the rate of wages reports the current supplies of comestibles, or is determined by the volume of them. If it be urged that the laborer's paying power is, after all, traceable back to his employer, it is likewise equally to be asserted that the employer's paying power traces back in turn to the intermediate man who handles his goods, and finally, therefore, to the consumer of his products — namely, often, to the laborer.

There is doubtless more of truth in the view that the laborer's earning power and his derivative wages are,

to a great extent, dependent on the capital equipment with which he works. But *capital* in this sense is not the capital of the wage fund discussion, nor is it the capital with which the initiative in enterprise can be asserted to lie. Nor can it be true that the kind of equipment determines whether the laborer shall or shall not work at all, but only the terms of effectiveness at which he works. That scant or poor tools mean the impossibility of employment, or little employment, observation and history unite to disprove. In societies of poor equipment, there is likely to be the fourteen-hour day — the women and the children toiling together with the men. To say that with only half as much capital, I could employ away from my competitors only half as many men falls short of proving that, if all employers had half as much capital, the aggregate of employers could employ only half as many men. But however all this may be, this particular view, it should be noted, shifts again the meaning of *capital* back to the concept of a fund rather than to the concept of equipment. In which of these two meanings Adam Smith was employing the term in his well-known doctrine that "the number of useful and productive laborers is everywhere in proportion to the quantity of capital stock which is employed in setting them to work, and to the particular way in which it is so employed,"¹ it is difficult to be certain. But perhaps it does not matter; Adam Smith's theoretical work was rather an anticipatory anthology of all the later divergent doctrines than a consistent and systematic application of any one. In any tenable view of the question, at all events, the analysis has again implicitly to include distributive forces and adjustments. If the worker has good rather than poor or scanty equipment to work with — especially if it is not

¹ *Wealth of Nations*, Introduction.

his own equipment — there is always the question of how much, if any, of the larger aggregate result will go to him, as over against the better equipment that made the larger result possible. The view has long been widespread among wage earners, that the machine owners absorb in rents or profits or interest all of the larger product due to the machines, at the same time with depriving many laborers of any employment at all. That such is not the fact — assuming that it is not — could obviously be established only through a distributive analysis. But it is evident that the doctrine that each factor receives whatever it contributes can deny the exploitation of labor only on terms of denying also any distributive advantage to it — the presence or the absence of the equipment being irrelevant to the wage.

No account of the logical relations among the various wage theories can find a ready place for the labor-pain notion of wage determination. But interpreted either in the Crusoe or in the collectivist emphasis it makes a fairly cogent appeal. The independent worker finds his limit of productive effort at the point of equality between returns and sacrifices. Being equal magnitudes, either marginal utility or marginal cost might equally well be urged as the common denominator of products. So, under competitive wage relations, each laborer, free at any instant to work or to refrain from working, would find his own particular point of equality between the remuneration for his labor and his protest against labor. Here, as always and everywhere, the marginal relation is one of equality between inducement and resistance. But in its very nature it is a ratio between quantities rather than itself a quantity. Even any one laborer, varying at different times in the intensity of his desire for goods and in the health or strength or vigor to

labor and in the degree of burdensomeness attending his productive exertion, would find the equality ratio always a changing one in point of the quantitative inducements and protests equating under it. The clearer, therefore, is it that equal wages for different men can imply no equality between the respective sacrifices undergone, but only an equality for each between his marginal sacrifices and the returns — this ratio being always of unit value, but the quantities involved being indefinitely divergent. Wages cannot vary to accord with individual sacrifices — pains a common standard of inter-individual wages. It is then to be recognized that at best the sacrifices in labor (1) are a common denominator to any individual for one particular time only; (2) and then only at the marginal fringe between efforts and returns; and (3) are entirely inapplicable as standard or measure for the wages of different men.

It is further to be noted that the sacrifices of labor include not merely the stress and strain of effort — the pains that attach to that sweat of the brow by which some of us eat bread — but include also for many men the displacement of the affirmative gratifications offered by leisure and by the time-consuming spending process.

And still further: Under any possible emphasis, this pain or sacrifice theory of wages is, in its own particular sort, a productivity theory. The sacrifices as the supply limiting fact equate against the prospective product or the offered wage as the demand fact. The wage-paying disposition of the employer is based on the price gain in prospect for him; is limited by the prospective contribution to price; is motivated by productivity in the sense of proceeds, *Ertrag*, returns.

Thus far, indeed, all the different wage theories are productivity theories. And, excepting in the socialist

or surplus value theory, the logic of the competitive process assumes a point of marginal adjustment at which the receipts of enterprise are at an equality with the outlays or costs — demand equating against supply. The way is thus clear for an examination of the theories of a more modern tenor.

It is, in truth, no simple task to discuss the productivity theory of wages, precisely because there is no one productivity theory, but only a group of more or less closely interrelated theories. It is safe to say that practically all non-revolutionary economists of the present time hold some one or other form or forms of it — each economist at least one and not rarely several — each theory so held being variously articulated with one or more other theories — subsistence, standard or wage fund — and possibly with more than one variety of each of these others. There is, in fact, no difficulty in holding the subsistence theory or the standard theory, at the same time with some one or another productivity theory. The difficulty is really just the other way about. The earlier theories appealed in substance to an implicit productivity analysis, naïvely held doubtless, and without distributive emphasis or supplementation. Almost as much, tho perhaps not quite so securely, might be said of the wage fund theory in such of its aspects or subdivisions as, being more than mathematical truisms, purported to have analysis of any sort behind them.

Otherwise than in connection with some implicit ethical or apologetic emphasis it is probable that no socialist need — no matter what socialists actually do — be any the less a socialist because of his adherence to a consistent productivity doctrine. So equally of the single taxer. The condemnation of private property in

any of the tools of production, land included, or the condemnation solely of private property in land, need in no sense be inconsistent with the recognition of the most precise correlation of the earnings of the machine or of the land with the distributive share competitively allotted to the owner of it. The merits of private property in land are not to be deduced from any conclusion that the rent is or is not too great or too small, or is the precise equivalent of what the use is competitively worth — the precise correlative of the contribution of the land factor to the saleable product. The question is not how much rent the land should command, but for whose benefit the rent should accrue — to what proprietorship, private or public, it should attach. The single taxer is, in fact, a thoro-going believer in the competitive order. To him rent is a competitive category, and is the more iniquitous as the competitive process is working the more completely and precisely. It is, therefore, no part of his case to prove that the rent is overgreat or oversmall. Nor need he either deny or assert that it is precisely what it ought to be, its specific "worth" — an ideally fair case of bargaining between landlord and tenant. Whatever the landlord gets, be it much or little, and no matter how fairly charged, the landlord should not have it. It is the personal and not the functional distribution that the single taxer puts in question. So, again, the socialist need not the better like the institution of private property in any productive instrument, any item of technological capital, were he convinced that the distributive share competitively awarded to it expresses the result of an entirely fair bargain between owner and hirer — no greater charge, for example, than a fair state might impose for it, were the state an owner leasing out the property.

It is no doubt true that the socialist rarely or never thus presents his case. Commonly, indeed, he holds a wage theory fundamentally inconsistent with the productivity theory in any one of its forms — a theory yet to be considered with the utmost care.

But the view is that the distributive processes of competition are fair and salutary in the precise degree that they approach the completely competitive norm — involve no monopoly, eliminate friction, take place under an open, intelligent, watchful bargaining, are competitive to the utmost implicit competitive logic — that such a perfect competition is so far a perfect ethics as to discredit by ethical tests any system or process arriving at other distributive results — such a view involves the assumption that income competitively gained is not merely derivative from social service but tends to be approximately commensurate with social service — that all gain reports and represents not merely additions to aggregate product but contributions to a socially beneficent product and a remuneration commensurate with the social service attending the product. All gain is, therefore, ethically righteous, self-warranting, and justified, in the degree that it is achieved in harmony with the competitive process.

There is, obviously, not now the space, as, it may be hoped, there is not now the need, to go far in examination of the ethical aspects of the distributive process in any competitive order, perfect or other. I have elsewhere sufficiently insisted that, if either validity or intelligibility is to be ascribed to the productivity theory, it can be solely through interpreting *product* to mean merely *gain* — returns, *Ertrag*, proceeds. The distinction between industry and business is sufficiently obvious. And if ever the lack of necessary coincidence

between private gain and social welfare has gone unregarded, these current years of war are making it sufficiently manifest. That one is manufacturing candy at good margins, or desires joy-riding gasoline and buys it, or can afford himself more wheat bread than he can wholesomely eat, or, being possessed of the funds for building a house, compels the ships to go unbuilt, or, as financially competent to keep his house luxuriously warm, brings it about that others shiver, or is gainfully employed as producer or enterprisingly engaged as consumer in directing advertising flares out into the interstellar spaces — in none of these cases can the mere fact that the thing is done be the adequate certification of its rightness, or of the solicitude for the aggregate welfare that prompts it, or of its actual significance under that test. The strong-arm man serving for pay under a contract duly executed may be fully worthy of his hire, and yet, having earned his murder fee, be none the less a criminal — his employer also only something the less a rascal that he does not default in the promised payment. For the purposes of the contract and by its test the honest man may be merely the man who stays bought. But the equities inside a contract are not self-warranting by the exterior social test. The thing promised to be done and honestly fulfilled may still be a colossal dishonesty. Competitively speaking, Fagan's pickpocket urchins earned their evening's dole as obviously as their regular cuffings. They were *producers*. But their wages no more established their social deserving than the cuffings their transgressions. What under the ordinances of competition one gets gives no safe report of what under the ordinances of God he deserves.

And as, even in the distinctly industrial field, it is possible to burden the productivity beyond its carry-

ing capacity in institutional and ethical aspects, so too much may be demanded or asserted for it in point of precision. The fact that it is a theory of distribution — that the distributive processes are the very subject matter of it — should have stamped as hopeless any attempt to isolate precisely the separate price product of any factor that, never functioning separately, has no separate product, or to establish the precise equivalence of the hire with the contribution toward an industrial product jointly produced by several factors. Even if any entrepreneur could for his own purposes isolate and make precise the separate significance of any of the coöperating factors, there is nothing to indicate that the payment imposed upon him is this full and precise equivalent. And — still assuming this ability on his part — each employer must arrive at a different appraisal. Actually no one of them could arrive at any — or would have any need to — in any other sense than that of determining what reduction in price results for him the lack of any item would carry with it, what he could, if he must, at the outside pay rather than go without it — which is not at all the same thing as to determine what it produces. What accrues with its presence is partly the expression of the greater significance of the other factors functioning together with it. What is lost by its subtraction is the breaking up of the group, and is thus a subtraction from the significance of each of the different members of the group, to the extent that the significance of each individual member is reflected to it by the group relation. Some part of the significance of the subtracted member is itself dependent upon the group relation. The loss attending the breaking-up of the group attaches to the subtracted member equally with the other members. All were in the group — were brought in and should remain in —

because in the interests of the maximum result it is not well that they be separated.

If this point should be still not altogether clear, test it by recurring to the rent and wages relations in the cultivation of land. The application of more and more labor expense to land brings about a larger gross return — increased money outlays for labor bringing an increased money return from the property. But, in the competitive distribution of the new aggregate of money product, the rent share is an increasing quantity; which is merely to say that there is now allotted to land rent some part of the increment of product casually due to the application of more labor. To assert that the land produces more, now that it gets more, is to say that because the land gets part of what the laborer added, it was the land that added it. That the land gets more is merely a corollary from the familiar distributive law that, with any change to the proportion of the cooperating factors, it is the factor that is becoming relatively scarce that gets the relative advantage in the new distributive allotment of the new price product. If, for example, one hundred units of labor applied to free land achieved one hundred dollars worth of product and entirely absorbed in wages this one hundred of dollar units — a per capita wage of one dollar — a doubling population, working under conditions of diminishing return, will achieve results, we will say, of one hundred and eighty dollars — a per capita product of ninety cents. But this is not at all to infer that the wages will fall merely from one dollar to ninety cents. Land rents emerge. If the rent is thirty, there must remain only a total of one hundred and sixty to be divided among two hundred labor units — the wage not ninety cents but eighty. The increase of ninety of product, casually due to an increased supply of the labor factor, is distributed

to the extent of only two thirds of it to the factor achieving it; one third of it is allotted in the distributive process to the advantage of the land factor. The wage share therefore suffers in two aspects — first, a smaller sum per capita to be divided; second, a smaller fraction of what there is to be divided. No distributive problem admits of a correct solution by asking what increase in the amount to be distributed is casually attributable to any changing factor. Always there must be the further step of taking account of the changing ratios in the distribution. And this is merely to say that distributive doctrine must finally always be distributive.

It remains merely to note a curious case of mixture or confusion of two wage theories which taken separately have certain potencies of service — essentially a misjoinder of two doctrines, each good within limits when taken separately, but which, when together, result in either a futile neutrality or a menacing new compound. The standard of living wherever it works out, as occasionally it does, through a restricted birth rate into a limitation of population has, as we have seen, some inevitable bearing on wages — a productivity analysis, albeit implicit and unrecognized. The view under criticism, however, ascribes to the standard of living the rôle of fixing the supply of labor, and to the productivity of labor the rôle of fixing the demand.¹ But if the supply of labor has itself no bearing but to affect the productivity, the doctrine in question appears to lack something in its logic.

The same lack, but in the inverse direction, infects the socialist, the surplus value theory of wages. Borrowed

¹ See, for example, Professor T. N. Carver in the March, 1905, *Journal of Political Economy*, vol. xiii, p. 263.

from classical thinking, it is purely a supply doctrine of wage fixation, wanting entirely, however, any final appeal to the marginal productivity influences implicit in the original doctrine. There can be, it is clear, no exploitation of labor, no surplus value, excepting on the assumption that the product furnishes to the entrepreneur — or to the capitalist, as the Marxian puts it — a value product in excess of the labor hire at the subsistence level. The subsistence costs establish a wage for labor, so the doctrine runs, indefinitely widely divergent from the price product that the labor affords. Thus all the significance of improving technique is absorbed in interest or profits. But none the less the doctrine retains the Malthusian emphasis; it is still a population doctrine. The larger supply of laborers depresses the wages, not by lowering the margin of cultivation of land or the marginal per capita product in industry anywhere, or by the more plentiful supply of labor relative to capital goods and the attendant unfavorable distribution of wages, but only through the constant pressure of famished hordes of laborers bidding down wages to find employment. It is solely the hungry competition of these out-of-works that affords capital its leverage of exploitation. If the laborer with a job demurs at his subsistence wage, there are always out-of-works to take his place — labor turnover and employer gain going together. The enormous gains that are accruing to employers fail somehow to evoke a competition effective to eliminate these gains. Lands and machines, it is held, receive remunerations competitively fixed; but with labor and wages there is only the competition of the units of supply against one another. With horses and mules, the hires report an equilibrium between marginal costs of production, fixing supplies, and the marginal productivity, as manifested under the conditions

of the actual supply. But with labor it is not so; marginal cost and marginal product do not equate. Hence the wage system is an institutional exploitation. The supply aspect of the facts is alone taken into account. There is no appeal to productivity; nor is any distributive analysis attempted.

It is perhaps sufficiently clear that I have no quarrel with the productivity theory either for wages or for the entire distributive process, as a large and general account of the competitive facts, if only *productivity* is interpreted in the sense of *proceeds*, if all ethical implications and inferences are eliminated, all institutional justifications avoided, and all inherent and specific productivities disavowed. There is no better reason for regarding the wage of any item of labor or the hire of any instrument as the precise expression of its efficiency for purposes of gain in enterprise than there is for regarding the price of a pound of tobacco as the precise report of its desiredness or aroma or nutritive quality or of its aesthetic or ethical worth.

But when once these limitations or corrections of the productivity doctrine are recognized and the attendant restatements accepted, the way is cleared for certain important applications of the productivity doctrine to questions of general welfare, and particularly to the wage problem. The time has arrived, as I believe, for a fundamental restatement of the problems of low wages and of poverty. I take it to be an entire misconception to believe that much can be achieved for the laboring classes through inducing or imposing larger wage outlays on the part of the employer. No important or general increases of wages are possible—the wrongs to labor in no considerable degree being with the employers.

These employers are subject to competitive conditions, and have not, and cannot have, in the large and the long run, seriously wide margins of gain. Nor can they, advantageously to the wage earner, be deprived of these gains. In general, then, the problem is not how to raise wages or other artisan incomes, but how to protect from exploitation these incomes after they are once received — not the question why the wages are so small but why they buy so little — the régime of exploitation of the consumer by various methods of franchise, privilege, predation, fraud, political guile, private property in social wealth, multiplication of waste, expensive devices for defeating justice or for making illegal things legal, unjust and favor-dispensing taxation — all of these things that now and then we all recognize and deplore. But I insist that these things taken in their cumulative effect are the explanation that so large a fraction of the population, possibly 30 to 40 per cent, is living at the expense of the rest of the population — the explanation why so little gets produced and also why the producers are defeated of getting it — defeated not in the primary process of getting wages for their labor, but in the further process of getting goods for their wages. The wages buy under present conditions far less than they ought to buy. I am convinced that to agitate in the other emphasis is merely to becloud the issue. To state the problem wrongly is to make stronger the defense of wrong; to prosecute the wrong man is to play the game of the culprit. More emphasis needs to be given to plans for getting revenues by other methods than by putting up the prices of goods against consumers. Income taxes would be good — far better than the house taxes that make rents higher. Inheritance taxes are still better than income taxes, and would go further to diminish the handicap of heredity by which

the disinherited classes always greatly suffer. And it is true also that under right methods of collecting government revenues there need ordinarily be no taxation at all, if only the enjoyment of special privilege — inclusive of the privilege of overcharge in one way or another — were outlawed. Far better than the taxes that make the rents higher would be the taxes on the lots. The tenant pays tribute also to the steel trust, to the timber owners, to the lumber dealers, the glass trust, the bath tub trust, all in the form of house rent; pays tribute to the mine owner for the coal on the mine sidetrack; and further tribute to the franchise owner in order to get the coal carried; pays by tariff more for his clothes, in order that the manufacturer may have a privilege; pays other tribute if he travels; still other when he dies — to the coffin trust and to the real estate speculator who owns the cemetery — finds, indeed that between the exactions incidental to getting into the world and the other exactions imposed on getting out, he must take no risks of having children; is robbed by all sorts of other plunder plans in ways which the law does not sanction; and still finds that by the expense of litigation which the law does sanction if he seeks a remedy, it has practically denied the remedy, and that thus an automatic safety is guaranteed to numberless other plunder plans. The profits of the steel trust this year are running at the rate of twenty to thirty dollars per family — one among the hosts of trusts — an annual gain approximately double the original value of the steel corporation investment. The cities are not rare in which the streets are lighted for the business men out of the taxes paid by consumers in higher rates. Low taxes on business property multiply the investment in palatial business buildings on which the consumers of goods are summoned to pay the rents accompanying the competitive struggle for patron-

age. In these shops the buyer gets two cents worth of cereal, with a loading of thirteen cents for carton and brand and publicity outlays. Puffed wheat at fifteen cents a package of four ounces means wheat at thirty-six dollars a bushel. For a dollar the purchaser gets a glass bottle, a glass stopper, a velvet leather cover on the stopper, a ribbon around the stopper, an art label on the bottle, an artistic box, another art label on the box, a wrapper and string around the whole purchase — and inside two cents worth of cologne.

There would, however, be less protest from the point of view of the purchasing power of the wages, if these expensive street lights — which consumers in general pay for — carried with them anywhere a social service. So far as they are items of expense in competitive advertising, they do not. If, likewise, the low taxes on business property were returned to consumers in the guise of lower expense loadings on purchased goods, instead of working as a stimulus to the erection of still more expensive structures — the higher costs of which must be remunerated in higher business rentals and in turn charged over in the sale prices at which the consumer gets his goods — the situation might yield some solace. In truth, however, the theory of wages is not complete till account has been taken of the bearing of merchandising activities on the purchase prices of goods.

With respect to the ordinary outlays for advertising, for sales people and for commercial travelers, it is clear that in the large these costs are included in the retail selling price. The costs of selling the goods to him the purchaser buys with the goods — with something additional for margins. Perhaps salesmanship could be defined as the gainful art of selling the costs of selling.

But there is obviously danger here of mixing things. The wastes of competitive merchandising are not rightly ranked with monopoly, bad legal systems, blue sky juggleries, unearned increments, the traffic in nostrums, unequal taxation, private property in privilege. The sole principle of unity is in the common bearing on the purchasing power of wages. Nor to certain of these influences is it safe to deny all bearing on the amount of the money wages received.

In any case, merchandising and salesmanship rank quite clearly among the many forces to explain why the wages, once they are received, buy so little, as also to contribute to the explanation of why they are so little. Illustratively, therefore, salesmanship is especially to the immediate purpose. Space fails for even an adequate catalogue of the various items of charge to be included in the prices paid by consumers — costs of making the goods more attractive than those of one's competitor, or more conveniently available, or better known, or better acclaimed in quality, or more appealingly presented, or of stricter vogue — rents of business locations, expenses of furnishings and fittings, attendance, delivery, newspaper advertising, bill boards, electric displays, packing, wrapping, cartons, labels, ribbons, rest rooms, restaurants, concerts, subscriptions to public undertakings of entertainment or charity, sales forces, solicitors, traveling salesmen, demonstrators, insurance, taxes, light, heat, storage — charges without end, some of them doubtless inevitable, and not a few of them connoting important services. It is their summed-up cost that is appalling. And still more appalling is the lack of any theoretical limit to their increase. So long, indeed, as the producer or the merchandiser finds it possible to sell indefinitely more goods at high prices than at low, providing that with the in-

creased price there goes something like a corresponding increase in selling outlays, it will be true that competitive success will turn on resourceful salesmanship. And thus, more and more, enterprise comes to be a contest of wits in selling to consumers the costs of selling to them.

It is to be recalled that these marketing activities embraced within the inclusive term *salesmanship* are not merely offensive in purpose and effect, as the necessary costs of getting a competitor's trade away from him, but are equally defensive, the necessary costs of keeping the trade that one has. They bid fair to grow with the passing years, as so far they have grown. The rising costs of doing business are as much a commonplace with the retailers as with their critics. The fault is one of process rather than of persons. When manufacturers' and jobbers' costs are included with wholesalers' and retailers' costs as making up the aggregate outlays of sales departments and of separate enterprises of sale, it probably is not far wide of the truth to fix at 50 per cent of the consumers' price the charge competitively imposed for these intermediate activities. This percentage may easily be overlarge. Or, equally well it may run appreciably short of the truth. At best it must be not better than an average of averages. Actually it is something short of this.

In any case, so far as these intermediate charges have significance solely for competitive offense and defense, or are due to the excessive subdivision of the retail traffic, or to perplexities of brand and trademark, they are mainly, if not entirely, social wastes. Some of them — as, for example, the colossal ground rents which city merchandising explains and city merchandising pays — may in no great part go to enhance marginal selling costs. But in the main, it is clear, the consumer must make good all sales charges. Merchandisers' rivalries

being rather competitions for clientele than competitions in prices, the process tends rather toward larger than smaller expense loadings. *It pays to advertise* formulates in familiar terms a truth of wide competitive application.

It is, however, in its distributive aspects that the development of salesmanship comes to be of especial illustrative interest for the theory of wages. Salesmen are paid salaries on precisely the same basis of business policy as mechanics and artisans are paid wages. Directly, all are distributees out of the particular fund of the employer's receipts, indirectly, distributees out of the great fund of the aggregate social dividend, their remunerations equally and under the same title cost outlays incurred by the entrepreneur as means to his ends of individual gain. Each is therefore productive to the entrepreneur. For all of his purposes, and therefore for all of his distributed remunerations, no distinction exists between industry and business or between mechanic and salesmen. He pays for either accordingly as he must in achieving his purposes of gain. Thus it comes about that merchandising and salesmanship, as particular items in the general competitive process, afford an effective illustration of a wide range of forces and influences bearing in the actual competitive process either to limit the fund of products out of which laborers in general can be paid or, in addition, to diminish their relative shares out of this aggregate product.

If, then, more and more in business policy, the sales process tends to overshadow and to displace the mechanical process — the selling activity to acquire importance as against industrial activity, business investment flowing into salesmanship rather than into

technical processes, the science of advertising acquiring an importance surpassing that of technology, skill in selling things taking precedence of skill in making things — it must follow that for artisans and mechanics there is a narrowing demand, in precisely the measure that the demand is widening for other abilities and activities better suited to the business purpose. Out of the price at which the consumers buy the goods, a diminishing share is therefore allotted to the factory process, for distribution to the artisan laborer. The pay-roll is the scantier for the mechanic as a more generous share of it is appointed to the advertising expert and the commercial traveler. The wage fund for one class of laborers is diminished to the advantage of a substitute and competing class. Investment forsakes the mechanical and industrial field for fields of greater return. The place and wage of industrial labor are, in some sort, a residuum available only after other and more important matters of the play have been considered.

But this is not the entire case. Any labor, wasteful or parasitic under the test of social serviceability, participates in the distributive process with no corresponding contribution to the social dividend. So far, then, all distributive shares, wages with the rest, may be assumed to suffer. But the salesmanship function holds the competitive, the substitute, relation to all mechanical and industrial functions. From the point of view of any particular industry, doubtless, the factory process and the sales process are complementary. Each must be if the other is. The goods must find a market else they cannot be made. But this is only competitively true — true for each particular industry in the rivalries of business. It does not hold of production taken in the aggregate. From the collective point of view, these processes of ornamentation, display, advertising and solicitation

displace the mechanical and industrial processes. Not more mechanical and artisan labor is applied because of marketing activities, but less.

In the aggregate, therefore, all gainful ways of employing labor that are not also socially productive are waste and nothing more; the social dividend suffers with no diminution in the number of claimants against it. But in the competitive process the distribution of the diminished product is also modified. The increased emphasis for gain-getting purposes on the activities displacing mechanical and industrial labor, redistributes the total share to be allotted to the labor factor to the marked disadvantage of artisan wages. There is, that is to say, a distributive change in the relative shares allotted to the different grades and varieties of labor, a redistribution within the labor group. As the substitute and competing laborers get more, the artisans and mechanics get less. Not merely do these last share in the loss attending a diminished social income of concrete things, but also they are subjected to a disproportionate share of the loss. They are the chief sufferers through the entire process — the distributary legatees of the cumulative deficit.

All this is not so much a novelty in distributive theory as, in the main, merely a neglected application of principles long established. Where certain of the factors in a joint process are becoming more expensive the others suffer. Those becoming relatively plenty become also relatively cheap. But it has not been quite clearly recognized that in the processes of competitive rivalry, and by the standards of these processes, there are other than mechanical and industrial factors. There are business factors, equally productive by the test of gain. Advertising, for example, is such a factor. Salesmanship in the large is a group of such factors.

Thus it must be recognized that all parasitisms, predations and wastes bear adversely on the distributive process in the large, because they bear adversely on the total of goods to be distributed. Incomes have, then, to suffer in the average, wages with the rest. But some of these adverse influences bear in especial degree on wage earners in the spending of their incomes. Others impose in addition on a particular class of laborers, the artisan and mechanic class, certain peculiar distributive disadvantages. The theory of wages needs in general, then, supplementation to take account of the difference between competitive acquisition and social production. It needs to take special account of the peculiar bearing of certain gainseeking activities on the wages of artisan and industrial laborers, not merely (1) in what their dollars will buy after they are collected, but (2) on the number of dollars that are received.

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THE TAXATION OF LUXURIES AND THE RATE OF INTEREST

SUMMARY

I. Luxury defined as consumption which does not increase capacity for labor, 298. — Superfluities include consumption necessary for business connection, 300. — Short and long periods, 301. — Capacity for labor varies with consumption of necessities, 301. — Classification of commodities, 302. — II. Demand for necessities inelastic because (a) their consumption benefits both present and future, 304. — (b) Capacity for labor is limited, 306. — A tax on luxuries would divert labor to production of capital, also lessening demand, 307. — Labor would become more productive and real wages would rise, 308. — Wealth would be increased, 309; and transferred to people whose effective desire of accumulation is strong, 310. — III. Possible decrease in quantity of labor expended, 314. — Self-development not labor, 315. — Leisure, defined as time not devoted to labor, is either necessary or superfluous, 316. — Annual product varies inversely with superfluous leisure enjoyed, and might be either decreased or increased, 318. — Rise of wages might check fall of interest; convergence of altruism and foresight, 319.

I

THE proposition that "a tax for purposes of revenue should have the least possible prohibitive effect"¹ seems fundamental to the system of *laissez-faire*, and has been accepted, expressly or tacitly, even by writers who in general regard that doctrine with disfavor. But such a proposition cannot be established unless not only some but all of the repressive effects which taxes may have are examined, and found on the whole to be undesirable. It cannot therefore be a bar to the consideration of a tax on luxuries. In the present essay an

¹ E. A. Ross, "A New Canon of Taxation," *Political Science Quarterly*, December, 1892, p. 579.

attempt will be made to show that such a tax would have a tendency to reduce the normal rate of interest. To this task the discussion will as far as possible confine itself. The question of general expediency, which would seem to involve a careful comparison of incommensurable evils, must be understood to transcend the limits of this inquiry.

It is convenient to begin with a definition. "Consumable commodities," writes Adam Smith, "are either necessities or luxuries."¹ If we adopt Professor Fisher's conception of income, and use the word consumption as the equivalent of what he calls "enjoyable objective services" — that is, including labor which satisfies wants directly — we may say that all consumption must be either of necessities or luxuries. Let us now define necessary consumption as that which increases the consumer's capacity for labor. Luxury then becomes definable as consumption which does not increase this capacity.

At the outset we notice that, owing to the division of labor, an individual cannot attain his maximum productiveness without coöperating with others. To be able to do this with advantage, he must in a measure enjoy their confidence and good opinion. That of possible employers or customers is of most importance, but a person cannot regard anyone's estimation of him as a matter of perfect indifference, as is shown by the pecuniary value occasionally attached to reputation, which, be it noticed, is not entirely dependent on the direct satisfaction which a good reputation affords, but in all cases bears some analogy to business connection. Now A's opinion of B partly depends on whether B's consumption, or expenditure, is sufficient to bring his standard of living into conformity with what A con-

¹ *Wealth of Nations*, Bk. V, chap. ii.

siders suitable to one in B's position. And A's ideas on that head are chiefly determined by what is consumed by others in circumstances similar to those of B. Thus, to attain his maximum productiveness, B must make his consumption conform to a purely arbitrary standard, and all expenditure within those limits is, from his individual point of view, in the strictest sense necessary.

The point of view of the private individual, however, must be distinguished from that of society as a whole. From the latter standpoint, it appears that part of every man's consumption is necessary in order that he may develop his productive powers as they are affected by his physical, mental, and moral qualities; and part is necessary merely because other people are accustomed to indulge in such expenditure. The latter part of consumption might be called relatively, or, if I might venture to adopt Dr. Marshall's term, conventionally necessary.¹ From the social standpoint, however, such consumption is not necessary, but is purely a luxury, inasmuch as it does not, in itself, increase capacity for labor. The term *superfluity* might be used to denote consumption covered by the above definition of luxury from the social point of view, including both what an individual would regard as luxury, and that which is relatively necessary. This terminology would appear conformable both to economic authority² and to general usage.

The term *superfluity*, then, is more comprehensive than the term *luxury*. The distinction between them, however, is not only vague and hard to draw, but is constantly changing. It is often said that the luxuries of one generation become the necessities — that is, “con-

¹ *Principles of Economics*, Bk. II, chap. iii, § 4. The term is there used in a sense which I believe will not be found to differ substantially from the above. See also Dr. Marshall's whole treatment of the subject of *Necessaries*.

² See Sidgwick, *Principles of Political Economy*, Bk. I, chap. iii, § 3.

ventional necessities" — of the next. The tax here to be considered is primarily one on luxuries, but I shall assume that it would be extended to superfluities to an extent sufficient to prevent the standard of living of any class from rising otherwise than in conformity with an increase in productiveness.

The social point of view must be further distinguished according to whether a short or a long period is contemplated. In a short period, anything which necessitates a considerable change in people's habits will seriously impair their efficiency. On the other hand they can do without many things, such as moral guidance and art, the want of which would greatly lessen their efficiency in the long run. The longer the period considered, the less account must be taken of habit, but the more must be taken of things which contribute only indirectly to efficiency. In a period sufficiently long for every tendency to work itself out, a man could be thought of as a perfectly rational being, and his likes and dislikes, which are of such transcendent importance for shorter periods, could be entirely disregarded. The determination of what things may be necessities and what superfluities would then fall within the province of natural, or at least non-social sciences, such as physiology. The present discussion throughout deals only with ultimate tendencies, and the conception of necessities must be interpreted accordingly.

The above definition makes it possible to lay down the proposition that the aggregate capacity for labor of any society varies in the long run with the amount of necessities consumed. Both will tend to vary with the numbers of the population, but not necessarily in the same proportion, for a given amount of work can be done either by a smaller number of intelligent and

highly effective workmen or by a larger number of an inferior sort. This proposition also holds good regarding an individual. Indeed, it is with reference to it that the definition of necessities must be tested.

I am obliged to face the consequence that a particular thing may be necessary under some circumstances and a luxury under others. The two classes of commodities do not in general differ in kind. It does not follow, however, that the theoretical distinction is impossible of application. Professor Taussig, after remarking that productiveness depends partly on the average laborer's strength and skill, observes: "Men can live and do work for less than is necessary to enable them to do full work. The minimum for efficiency is above the starvation level. But when once they get what is necessary for complete physical vigor, anything in addition is mere surplus; surplus, that is, in that it no further increases efficiency."¹ Now this appears to be true not only of money income, or commodities in general, but of particular commodities as well. It seems usually to be the case that as successive instalments of a commodity are consumed each has less and less effect on efficiency, till finally the point is reached when additional units would have none at all. The consumption of the commodity need not cease at that point, for it may still satisfy a desire, but it becomes surplus consumption or luxury.² On any given occasion, then, the proper classification of a particular commodity will depend, in most cases, on how much of it has already been consumed.

Altho it is impossible to discover a difference in kind between necessities and luxuries, there would seem to

¹ Principles of Economics, chap. vii, § 1.

² In some cases continuing to consume a commodity after it has ceased to add to efficiency may have a harmful effect. Of other commodities this can hardly be the case. But this point need not be specially considered in the present essay.

exist a difference in the degree to which different commodities may enter into consumption as necessities. Some commodities, such as text-books and medicines, satisfy no immediate desires, but are consumed solely for their effect on the consumer in the future. If we confine our attention to sources of immediate gratification, we may distinguish, first, a class of commodities the consumption of even a single unit of which can have no beneficial effect on the consumer as regards his capacity for labor, tho it may satisfy a very intense desire. These are pure luxuries. The generality of commodities constitute a second class. They both satisfy immediate desires, and also have the effect of increasing capacity for labor; tho if successive units are consumed a point will be reached when further consumption would become a pure luxury. There is, however, a third class of commodities which can scarcely be consumed except as necessities; that is, they cease to satisfy desires at nearly the same point as that at which they cease to add to efficiency. Plain food, coarse clothing, and even small dwelling houses appear to belong to this class of commodities, which may therefore be regarded as including the necessities of life and the main necessities for efficiency of an unskilled laborer.

Considering commodities from the standpoint of value, we may reach the same result. If the distinction between desires for present and desires for future gratification be neglected, it may be said that commodities of equal value have about the same marginal utility or capacity to satisfy desires. But their effect on the efficiency of the consumer is very different. Money spent on pure luxuries will add nothing to efficiency. On the other hand, if money be spent on education, properly directed, the amount by which both earning power and social productiveness will be increased is

much greater than the amount so spent.¹ The same applies to the necessities of life and the necessities for efficiency of an unskilled laborer. Somewhere between these two extremes the generality of commodities will find a place.

The point has now been reached where the object of the present inquiry may be definitely formulated. Suppose that taxes at a high rate were levied on services or commodities which can add nothing to the industrial capacity of the consumer, and that those which are calculated to augment his capacity by more than their own value were exempted from taxation. And suppose that commodities which lie between these classes were taxed at a varying rate, high or low, according as they are likely to add little or much to the consumer's capacity for labor in proportion to their cost. If taxes on this principle were imposed and maintained for an indefinite length of time, what would be their final effect on the normal rate of interest?

II

It is remarked by Professor Ely that "the demand for necessities is in general less elastic than the demand for luxuries."² This proposition may be supported on two separate grounds, whereof the first shows that the first increments of necessities consumed must satisfy very intense desires; and the second, that subsequent increments will satisfy desires of which the intensity tends rapidly to diminish.

The first ground is as follows. It is obvious that all saving is a sacrifice of the present to the future, for

¹ See the remarks on this point in *A Theory of Interest*, by C. G. Hoag, pp. 103-105; also the definition of luxury in *Elementary Principles of Economics*, by Ely and Wicker, p. 120.

² *Outlines of Economics*, p. 164.

while it augments future resources, it diminishes present enjoyment.¹ Let us now examine the converse of this proposition. If every person's income, and also his capacity for enjoyment, were rigidly fixed independently of his own efforts, all expenditure, and therefore all consumption whatsoever, would be a sacrifice of the future to the present. This seems to be strictly true in regard to consumption of luxuries. It is not true, however, of the consumption of necessities, for expenditure on them is, by definition, offset by an increase in the consumer's capacity for labor, and hence, in his earning power. So far as necessities at the same time gratify immediate desires, the interests of the present and of the future are, within limits, identical.²

If necessities be held to include such things as medicines and text-books, and the services of physicians and teachers, which satisfy no immediate desires, consumption of this kind must also be reckoned a sacrifice of the present to the future. It is, in fact, a form of saving.

Now, the desire for even the first instalments of necessities of the latter class may not be very intense. They may be and indeed often are crowded out by luxuries. But the desire for necessities of the former

¹ This is, of course, strictly true only on the assumption that present wants are infinite. The law of diminishing utility implies that the larger is the income, the smaller is the sacrifice involved in saving a given quantity of resources, so that in the extreme case of the very rich it may be that some saving can be made without any sacrifice of present gratifications. By far the greater part of the savings actually made, however, must involve such a sacrifice.

² For a simple but excellent discussion in this connection, from a wider point of view, see Ely and Wicker, *Elementary Principles of Economics*, 1917, pp. 116-126. Even from the restricted standpoint of the present essay this proposition must be qualified for two reasons. First, capacities which can only be acquired at great expense, in money and effort, may enable their possessor to earn little, and vice versa. There is a tendency, however, for the supply of services the capacity to render which is easily acquired to be great, and therefore for their value to be small, and conversely. Secondly, insofar as capacity for labor is independent of capacity for enjoyment, the labor rendered possible by the increased capacity must actually be performed, if the diminution in present income is to be offset by increased earnings in the future. This difficulty in classification will be referred to below (Part III).

class must be more intense than that for luxuries, for if the latter are not consumed, only the present is sacrificed, but if the former are not consumed, the sacrifice affects both present and future. The necessities of life are the most striking example of this general class of commodities.

The first ground, then, applies only to one class of necessities, but the following applies to both. Adam Smith points out that the desire for food is "limited by the narrow capacity of the human stomach." This remark, however, does not apply to food only. It may be laid down generally that, since no one has an infinite capacity for development, no one can have an infinite capacity for consuming necessities. It has been pointed out that altho any single desire is satiable, the possible kinds of desires are indefinitely numerous, and this variety renders consuming power in the aggregate indefinitely great. But this does not apply to efficiency. If a man is to attain the highest possible development of all his powers during his limited life time, it is essential that he should specialize to some extent. It would certainly be impossible for him to excel in an infinite number of occupations. This, then, constitutes a limitation upon the individual's capacity for consuming necessities that is not present, to the same degree at least, in the case of consumption of luxuries.

On these combined grounds, we may reach the following conclusion. If the other circumstances affecting the elasticity of demand for commodities, such as available substitutes and different uses,¹ are the same, the demand for necessities which at the same time satisfy immediate desires must be less elastic than the demand for luxuries, and the demand for other necessities is unlikely to be more so.

¹ See Pigou, *Wealth and Welfare*, Part, II, chap. ix, § 5.

In the remainder of this inquiry it will for simplicity be assumed that taxes could be imposed which would reach all luxuries without touching necessities. The fact that this is nearly impossible does not impair the validity of the theory, but merely limits the extent to which it could be applied.

Writers on the shifting and incidence of taxation appear to agree that a tax on luxuries would raise their price and discourage their consumption. This would take away the occupation of those who had previously been engaged in providing the luxuries. Now, the persons so turned out of employment must work at something for a living. They are not like machines, which will stand idle unless a use is found for them, but possess in themselves the power to find a useful employment, and the strongest motive for adopting that which is most advantageous. It is commonly admitted, also, that the permanent unemployment of large numbers is impossible. The only difficulty is to bring the jobs and the workers together. This problem is never easy of solution, and might be somewhat complicated by the taxes here in view; but if the imposition of the taxes were gradual, the difficulties in this connection would certainly not be insurmountable.

The displaced laborers, then, must work. But what is left for them to work at? They cannot find employment in producing other luxuries, as we must assume that there exist no substitutes which are left untaxed. No doubt many would devote themselves to the production of necessities, but if the demand for these is less elastic than the demand for luxuries, more persons would be turned out of employment than could be occupied in this way. The only remaining manner in which they can employ themselves is in providing for the wants of the future; that is, in producing capital,

in the form, for example, of improvements in land and labor-saving appliances of all kinds. We may suppose that machines would increase both in number and complexity. Tools for making tools, and for preserving them, would be constructed in endless succession, and greater durability would be imparted to each.¹

As the consumption of luxuries is supposed to be discouraged, the quantity of capital required for their production, and hence the demand for capital in general, would be, so far, diminished. By far the greater part of the new capital would inevitably be adapted to the production of necessities. But if such capital were multiplied in this way, the return to the marginal instalment, and hence the rate of interest, would eventually be reduced.

My attention has been drawn to the question whether the marginal productivity of labor would not also be lowered, so that some consideration of the effect of these measures on wages becomes expedient. The increase in the supply of necessities would evidently reduce their price, and this would lower the cost of living. But most laborers would now be engaged in producing necessities: would not their wages fall? The answer must be that if capital consists of labor-saving appliances, the increase of capital must increase the physical product of a given expenditure of labor. Therefore, altho the value of a unit of the product of labor would be lowered, money wages need not fall, for the number of units would be increased — and real wages must rise.

¹ In these conclusions the writer is in agreement with Mr. Hartley Withers, *Poverty and Waste*, chap. ii. He cannot bring himself to accept Professor Kleene's view that "there are limits, perhaps quickly reached, to the productive possibilities of employing additional capital." *Profit and Wages*, p. 94. Cf. p. 24, footnote. The writer follows Böhm-Bawerk, *Positive Theory of Capital*, Bk. II, chap. ii. See also John Rae, *New Principles of Political Economy*, Bk. II, chap. v, and Böhm-Bawerk's excellent summary of Rae's theory, vol. i, pp. 388-391 in the 1900 edition of *Capital und Capitalisms*; Cassel, *The Nature and Necessity of Interest*, chap. iii.

The only tendency which could counteract this would be the operation of the law of diminishing returns from land, or materials provided by nature. It must be remembered, however, that the production of luxuries also requires land. It is evident that a consistent and logical application of the taxes here considered would divert land from the production of luxuries and increase the supply available for producing necessities, including the requisite capital. Therefore, so long as population does not increase unduly, there seem to be no grounds for supposing that the marginal physical productivity of labor would change otherwise than for the better. The inevitable consequence seems to be a rise in the real reward of labor.

This view is confirmed when we consider the source from which wages are paid. The tax on luxuries, in proportion as it diminished the amount of luxuries consumed, would increase the amount saved. This would increase the fund which the business men or *entrepreneurs* in any society are ever seeking to employ profitably by making advances to laborers in exchange for the product of their labor. This fund is identified by Professor Kleene as the classical wages fund, and I am content to accept his description.¹ It must, of course, consist of commodities and services,² but there would seem to be no harm in conceiving it to consist of money, inasmuch as these real wages are advanced to laborers by means of a series of exchanges, and must therefore be measured in money.

The fact that the "wages fund" would be increased may be established as follows. "If I have a dollar to spend," writes Professor Carver, "over and above what I need to maintain my working power, I can spend it for

¹ Profit and Wages, chap. viii.

² See Taussig, Wages and Capital, particularly the first chapter, and cf. p. 117 et seq.

an article of consumption, or I can spend it for a tool." ¹ It may be added that every dollar must eventually be spent in one of these ways; ² since hoarding, or storage, besides involving a certain amount of risk and trouble, must necessarily be unprofitable as long as any interest whatever could be obtained.

It is further evident that the persons composing any society who are in receipt of a money income more than sufficient to procure necessities, may be divided into two classes; namely, those who spend the greater part of this surplus income on luxuries, and so save the smaller part of it; and those who save the greater part of the surplus, and so spend the smaller part on luxuries. Everyone who has any surplus income at all must fall into one or other of these two classes, or be on the border line between them. ³

Now a tax on money income bears equally on both classes. A tax on luxuries, however, would bear mainly on the extravagant class. To persons exactly on the border line it would make no difference how taxes were collected. But if a given sum of money must be raised by the government, and if the parsimonious class contribute little or nothing towards it, it follows that the extravagant class must pay more than they would if the tax had been levied on money income. It is evident that this will increase the aggregate savings of society, for what the extravagant class will lose the frugal class will gain, and the fund referred to above will accumulate in the hands of the latter.

It may be worth while to elaborate this point by means of a simple example. Let us imagine three

¹ *Essays in Social Justice*, p. 388.

² Cf. Pigou, *Wealth and Welfare*, pp. 440, 441.

³ If a person has an income only barely sufficient to procure him necessities, it would even on strictly economic grounds, be inexpedient to attempt to tax him.

brothers, of whom one is frugal to the point of stinginess, another entirely without thought for the future, the remaining one inclining to neither extreme. Suppose they each receive an income of \$5000 a year. In the following table, Case I is intended to indicate how their accounts might stand if taxes were levied on money incomes. Case II shows the changes that would take place if all revenues were raised by means of taxes on luxuries.

	Spent on necessaries	Paid to makers of luxuries	Paid to govern- ment in taxes	Saved
I. 20 PER CENT TAX ON INCOMES				
A.....	\$2,000	...	\$1,000	\$2,000
B.....	2,000	\$1,000	1,000	1,000
C.....	1,000	3,000	1,000	...
Total ...	\$5,000	\$4,000	\$3,000	\$3,000
II. 100 PER CENT TAX ON LUXURIES				
A.....	\$2,000	\$3,000
B.....	2,000	\$1,000	\$1,000	1,000
C.....	1,000	2,000	2,000	...
Total ...	\$5,000	\$3,000	\$3,000	\$4,000

The change from direct taxes to indirect taxes on luxuries increases the aggregate savings of this imaginary family by a third. The reasoning is equally applicable to an entire nation.

It is also to be noticed that the effect would be cumulative. The increased savings would be added to capital, which in turn would increase the power to save. If we suppose a gradual fall in the rate of interest, this cumulative effect would operate with less force as time went on, but the annual addition would be made to capital even if interest were to vanish entirely.

The aggregate consumption of luxuries must also diminish. For, if extravagant people were content to

spend the same amount as before on luxuries, this sum would buy a smaller quantity of luxuries after they were subject to the tax. If, on the other hand, this class of people insisted on consuming the same quantity of luxuries as before, they would be obliged to pay more for them by the amount of the tax.¹ They could do this, in general, only by trenching on their capital — a course which would lead to their impoverishment, and in the long run to an inevitable reduction in the quantity of luxuries they could procure.

If the impoverishment of extravagant people happened to any great extent, and if the government still required the same amount of revenue, it would be obliged either to raise the rate at which taxes were levied, or to extend their application. On the other hand, if the wealth of the community was increasing, the consumption of luxuries also would tend to increase, notwithstanding the taxes upon them.

It is certain that the larger the income any person receives, the greater will be his temptation to indulge in the consumption of luxuries. It may be that in many cases a person's "effective desire of accumulation" fixes a limit beyond which that person will not carry his savings. It is evident also that the current rate of interest must be among the circumstances which determine this limit. For example if a man feels himself called upon to choose between a fifty-dollar government bond and a champagne supper, the annual yield of the former will certainly be taken into consideration. For present purposes, however, it is not necessary to inquire into the motives which induce men to save, because, whatever they may be, it is certain that they operate

¹ This is an assumption on which the whole argument proceeds. It appears to be roughly true in the long run. During the transition period, of course, the tax would fall partly on the producers of luxuries — a hardship which could be mitigated by a cautious and gradual imposition of these taxes.

with unequal force on different individuals and different families. Out of a given income, some people will spend more than others; and with an increasing income, some people will increase their expenditure more rapidly than others. On the other hand, people who are naturally extravagant must spend less if they are poor than if they are rich. Now the taxes under consideration would constantly tend to throw a larger portion of the resources of society into the hands of people whose "effective desire of accumulation" or "time-preference" is such that they would continue to accumulate when the rate of interest fell far below what is required as an inducement to save by the average member of the community.¹

By a rigorous system of taxation, unflinchingly enforced for an indefinite period, the government of a country could, without doubt, modify the standards of living of all its inhabitants. The process, however, would be slow, and seems necessarily to involve a reconstruction of the economic strata of which society is composed. The influence of imitation and habit must be taken into account. It is evident that wealth confers power, and that the possessors of wealth must always, to some extent, constitute the leaders of the community, imitated by the other members. If, therefore, such taxes were imposed as would throw most of the wealth into the hands of the thrifty, gradually impoverishing those who are extravagant, the habits and standards of the former would slowly but inevitably impress themselves on the whole people.

If such a drastic policy were adopted in one country only, the tendency would be both facilitated and hastened by the emigration of people with extravagant

¹ My reasoning on this point is suggested by some comments for which I am indebted to Professor Taussig. See his *Principles of Economics*, chaps. 39-41; also Mill, *Principles of Political Economy*, Bk. I, chap. xi, and the chapters in Rae there referred to.

tastes, and, possibly, by the immigration of people of the opposite sort, who might be attracted in consequence of the fall in the prices of necessities and consequent rise in real wages. Indeed, such a policy might tend to cause an increase in the population even apart from immigration, which in turn suggests that the law of diminishing returns might come into operation. This, however, would act more slowly than the other tendencies set in motion by such taxes, and, in any case, would be likely to be counteracted by new discoveries. Nevertheless, it constitutes an influence which cannot be altogether neglected, and suggests that caution would be necessary in taxing luxuries habitually consumed by the lowest orders of the people.

III

The views of the present writer as to the causes determining the normal rate of interest have been outlined in a former article.¹ If that theory is correct, the proposition that a fall in this rate would be the consequence of the tax here considered would seem to be established but for one circumstance: such a tax might cause a diminution in the aggregate amount of labor expended by the whole community, and hence in the magnitude of the annual product. And here it must be admitted, I think, that no absolutely certain prediction can be made, for we have to deal with nothing less complex than the motives which induce men to exert themselves in the acquisition of wealth.² There are, however, some circumstances which may tend to allay our fears in this regard.

We must decide exactly what is meant by labor. All consumption involves some kind of activity on the part

¹ *Quarterly Journal of Economics*, August, 1917.

² See Taussig, *Inventors and Money Makers*, chap. iii.

of the consumer. "All sound, sight, taste, smell, touch, come about through reactions of the nervous system to external stimuli."¹ But surely these reactions are not labor. The consumption of some commodities demands conscious effort; and in some cases, where the benefit looked for is a future one, the effort is disagreeable. It does not, however, seem necessary to classify as labor any of these activities. For present purposes, exertions — disagreeable or otherwise — which are incidental to the consumption of any commodity or service, whether necessary or luxury, will not be regarded as labor. Since necessities are supposed to include all objective factors which contribute to the creation of "personal capital" it follows that labor will not include the subjective efforts which a person expends for the same purpose, such as reading text-books or studying under a teacher.² But writing text-books, imparting knowledge or skill, and generally *rendering* services to others, either directly or indirectly, must be classed as labor. Similarly, efforts which a person makes with no other object than the immediate gratification of his desires — playing games for example — are not labor.³ On the other hand if the sole object of the efforts is to gratify the immediate desires of other persons, they must fall into the same category as the exertions of teachers. Yet we must not exclude from our conception the efforts which a man expends, say, in building a house for his own future use. It seems, therefore, that labor might be defined as any exertion which a person puts forth for the purpose of creating a utility

¹ Fisher, *The Nature of Capital and Income*, chap. x, § 2.

² For this reason I hesitate to follow Professor Fetter when he seems to regard "taking medicine" as labor; *Economic Principles*, chap. xvi, § 5.

³ Cf. Jevons, *Theory of Political Economy*, p. 168 in edition of 1911. The conception of "opportunity costs" (see Davenport, *Economics of Enterprise*, chap. vi) appears to make it unnecessary to regard labor as painful.

capable of being consumed by someone else.¹ This seems in accordance with a very common conception which regards labor as having to do with the earning or saving of money, or wages.

Of the exertions which men put forth to provide for their own consumption, some are in the social sense productive of utility, and some are merely predatory.² It seems advisable, however, to simplify the present discussion by assuming that all labor belongs to the former category. It is evident that anything that an individual may gain by an activity which contributes nothing to the national dividend must be offset by a loss on the part of someone else. But, in the words of Professor Taussig, "it is the aim of the legal system under which we live — the system of private property — to inhibit predatory doings."³ Therefore in the above hypothesis we merely assume that the law accomplishes its object.

Now, if leisure be defined as all time not devoted to labor, including time spent in acquiring capacity for labor, it would seem that leisure can be classified, like all other sources of enjoyment or benefit, as either necessary or superfluous.

The introduction of the element of time reminds us that human life is limited, and it is convenient to take account of that circumstance in applying our classification in this instance. It is evident that some leisure is necessary for mere existence. Some of the examples that have been cited — by Marx for example — would lead one to think this minimum astonishingly small. If, however, only this barest minimum is allowed, no time is left to the worker for education, and the quantity of

¹ This and other parts of the present essay are the outcome of some valuable criticisms of which my work has had the benefit.

² See Taussig, *Principles of Economics*, chap. ii.

³ *Loc. cit.*, § 5.

work which he can accomplish during his lifetime must, owing to his inefficiency, be very much smaller than would be the case if his hours had been shorter. On the other hand, if a person spends more than a certain amount of time in repose, or in the pursuit of pleasure, or even in the attainment of skill and knowledge which he will be unable either directly or indirectly to apply, in this case also the total quantity of labor he will perform will be less than it might have been. Necessary leisure, then, may be defined as that which a man must allow himself if he is to perform during his lifetime the maximum amount of labor of which he is capable. All leisure in excess of this may be classed as superfluous.¹

Now the annual product is affected by the amount of time devoted to labor, and also by the efficiency of labor. And the circumstances affecting efficiency seem capable of classification under two heads: first, the capacity for labor which a people possesses, and secondly, the intensity with which their labor is applied. But capacity for labor is affected by the amount of necessities consumed, and among necessities in this connection must be included a certain amount of leisure. In this category must be placed the time required for education or training, and for any given person or group of persons, at least up to a certain point, this must be the more prolonged, the higher is the pitch to which their faculties are to be developed. Also it may be assumed that intense labor is more exhausting than that which is not intense, from which circumstance we may conclude that the more intensely people exert themselves, the more rest they will require in order to

¹ The definition of necessary consumption in the first part of this essay had reference only to the *capacity* for labor. But if the conception be extended to include leisure as above defined, this will exclude from that category any capacity for labor which will not actually result in a corresponding increase in production, since it may be presumed that all capacity for labor takes time to acquire.

prevent their capacity for labor in the future from being impaired. On these combined grounds it may be laid down that the amount of time which must be regarded as necessary leisure varies with the efficiency of labor.

It follows from the above definitions that the amount of time devoted to labor varies inversely as the amount of leisure which people allow themselves. Altho, therefore, part of this leisure is a condition of efficient labor, we may yet say that the annual product tends to vary inversely with the amount of superfluous leisure enjoyed.¹

Now, it may be urged, if we make the supposition that, in a general way, the elasticity of the demand of consumers for all superfluities is greater than unity; and if all commodities and services which can be consumed as superfluities are taxed, superfluous leisure alone remaining untaxed, will not this induce people to substitute the latter for the former, and hence to perform less labor? I suppose this must be admitted to be possible. On the other hand if the elasticity of the demand for superfluities in general is less than unity, a rise in the price of luxuries would tend to make people work harder. Here habit, by making demand more insistent, would tell in favor of action.

Again, how far is it true that superfluous leisure would remain untaxed? Luxuries are for the most part enjoyed during periods of leisure, so that by discouraging them the government would be making leisure less attractive, which would so far tend to make labor more so.

It may be that some people would restrict their consumption of necessities for the sake of continuing their usual enjoyments, which would injuriously affect their capacity for labor. The opposite effect is also possible,

¹ The reasoning in the remainder of this essay is due to suggestions for which I must acknowledge my obligation to Professor Taussig.

as may be shown by the following example. A hungry workman enters a restaurant and is confronted by a choice of two kinds of food, of which one is nutritious but unpalatable, and the other is tempting but affords little nourishment. It is evident that if the price of the latter were enhanced by a tax so as to be beyond his reach, he would eat the more wholesome food rather than go hungry. The effects of this are different according to how far he looks ahead. For short periods the gain in efficiency would be insignificant, and the loss of enjoyment considerable; but if the change in his consumption were maintained for a period of decades, his loss of enjoyment would be negligible and his gain in efficiency appreciable. If this example could be supposed to illustrate a general tendency, people might enjoy more leisure, even superfluous leisure, and yet not in effect perform less labor.

It was argued above that the taxes here treated of would, in reducing interest, also raise wages. If these contentions be correct, the proximate effect of such taxes — that is, after the requisite adjustment of industry had taken place — would be to bring the necessities for efficiency within the reach of all. Ultimately the rise of wages might check the fall in the rate of interest by making a living so easy to obtain that men of moderate desires would cease to have a motive for strenuous exertion. On the other hand, if it could be established that the mere increase in private savings could bring about a result so desirable — if the dictates of altruism and far-sighted selfishness could be shown to be so nearly identical — many who became convinced that this was the case would be likely to make the accumulation of wealth the supreme object of their lives, and no assignable bounds could be set to the savings which might be made.

Further speculations along these lines would lead us away from the sober reasoning proper to economic science. It must be remembered that a hasty and incautious interference with the normal course of trade would, temporarily at least, cause the loss of much fixed capital and specialized skill; and if the policy ran counter to public opinion it would lead not only to evasion but to discontent and idleness as well. On the whole, however, taking a broad view of the subject, there seem to be grounds for concluding that, if the revenues of the government were collected as far as possible by means of taxes on services and commodities which are likely to add little to the consumer's capacity for labor in proportion to their cost, this would ultimately tend both to increase the supply of capital and to lessen the demand, which might confidently be expected to result in a fall in the normal rate of interest. It may be added that this would so far constitute an approach to those ideal conditions under which the workman would receive the whole produce of his own labor.

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WAR LABOR POLICIES AND THEIR OUTCOME IN PEACE

SUMMARY

Earlier resort to leaders of unions in American Federation of Labor, 322. — Compulsory arbitration not tried, 324. — The War Labor Board, 326. — Its principles, 328. — Shop Committees, 329. — The Railroad Administration's labor policy, 330. — The Wage Commission of 1918, 332. — The permanent Board of Wages, and other adjustment boards, 332. — Local shop committees, 334. — General aspects of the war developments, 336. — The three types of labor adjustment, 336. — The Federal Employment Service, 338. — Its development to the date of the armistice and its future, 340. — Conclusion, 342.

In the issues of this Journal for November, 1917, and February, 1918, an account was given of the various methods which had been resorted to by the government for adjusting labor problems in war industries. The object of the present paper is to describe briefly the further developments which occurred during the last ten months of the war, and to consider these developments with reference to their bearing on labor problems and policies in time of peace.

A main theme in these earlier articles was that in order to accomplish any approximate stabilization of war labor conditions without compulsory arbitration, the government should control all contractors in war industry through provisions in the contracts limiting the contractors, under heavy penalty, to the payment of maximum scales of wages, these scales to be changed from time to time uniformly in any given industry by governmental adjustment boards, on which representatives of labor would sit. But it was pointed out that

the government could, by exercising its war power, effect this arrangement through recalling and modifying its outstanding contracts, and also its sub-contracts. Under the conditions of increasing labor shortage after February, 1918, the control most needed continued to be not that of the workers, but that of employers engaged in war industry. Such control did not emerge, either through government contracts or otherwise. The contractors continued to bid against each other for the labor supply, and an unrest developed among the workmen which seriously interfered with efficiency in production, and would doubtless have badly hampered war industry but for the motives of patriotism in all ranks of labor, organized and unorganized. It must be confessed that the national leaders of the American Federation of Labor did not in general exercise sufficient influence during those months to control their local unions in the disturbing conditions caused by the mounting competition of employers for the available labor.

Just why the influence of the national leaders in the American Federation of Labor did not prove more effective in dealing with the situation is not altogether clear; yet some of the reasons are evident. During 1917 the national union leaders had voluntarily undertaken great obligations and responsibilities by entering into written agreements with the government in which they pledged themselves and their organizations to a war-time production uninterrupted by strikes, and to the adjustment of labor disputes by representative arbitration which would be binding and final. In cantonment construction, in shipbuilding, and in general at the seaports, these written agreements forced the union leaders to assume such a vigorous leadership as greatly to increase their influence. Personal responsibility begets effort.

The particularist tendencies in unionism were checked, and the constituent national and international unions became centralized as never before in the Washington office of the American Federation of Labor.

It was intended that this method of adjustment should be extended from cantonments, shipbuilding, and the ports, over all war industry, together with the necessary concomitant of that method, namely, the control of contractors through maximum wage scales in the contracts. A preliminary memorandum, looking to an adjustment arrangement covering all munitions and supplies production, was tentatively signed by a number of union leaders in November, 1917. It is not unreasonable to believe that such a system, if carried out, would have led to a fairly satisfactory stabilization of labor. To the written pledge of the few union leaders involved in the earlier agreements, would have been added the written pledge of the many leaders whose members were interested in munitions and supplies production. But this form of contract control did not develop. Nor did the arrangements for a comprehensive adjustment board, based upon official pledges of all the national presidents with jurisdiction over production of all munitions and supplies, ever progress beyond the preliminary stage. Both of these projects encountered the baffling obstacles presented by government departments which were themselves bidding against each other for labor supply, and whose representatives could not agree upon a common course.

It was at this juncture that the current of labor adjustment in war industry became diverted into a new channel. In the new fields of war industry the international presidents did not become personally pledged in writing to agreements against strikes by members of their respective unions and to arrangements for adjust-

ment. This feature was absent in the National War Labor Board and in the Railroad Administration's system of labor control, both of which we shall examine directly. Thus was arrested a distinctive process of strengthening and centralizing the influence of the American Federation of Labor. Whether these leaders, if they had been so pledged, could have succeeded in such a great task of control and coöperation is a question which can never be answered. One thing is certain: that through this divergence from the method of labor adjustment which had obtained earlier in the war, the American Federation of Labor in the later months of the war lost the further development of that element of strength which came from the necessity of meeting these written pledges.

It will always be an interesting query whether, if the war had continued for a considerably longer period, some form of compulsion would have been adopted by the government. It is true that in the latter part of the year 1918 the strikes in Great Britain showed that compulsory arbitration does not always compel. But there were during the last months of the war signs that part of general public opinion in this country was beginning to favor some form of official duress, and that many of the union leaders, feeling their own control inadequate, would not have been opposed to such a course. In the middle of August, 1918, an attempt to make participation in a labor strike ground for a draft registrant's losing the benefit of his deferred classification was defeated in Congress. But only a month later, on September 13, the President in his handling of the Bridgeport strike invoked what was in effect governmental compulsion. The War Labor Board, having been unable to agree upon a decision with reference to the machinists' complaints at Bridgeport, had unan-

imously agreed upon an umpire to decide the questions at issue. The machinists, through the Bridgeport locals, had submitted their dispute to the umpire for arbitration; and the local organization, District Lodge No. 55, was now refusing to accept his award. The President, in an open letter addressed directly to the lodge, reviewed the situation briefly and closed with the following paragraph:

Therefore, I desire that you return to work and abide by the award. If you refuse, each of you will be barred from employment in any war industry in the community in which the strike occurs for a period of one year. During that time the United States Employment Service will decline to obtain employment for you in any war industry elsewhere within the United States, as well as under the War and Navy Departments, the Shipping Board, the Railroad Administration, and all other government agencies, and the draft boards will be instructed to reject any claim of exemption based on your alleged usefulness in war production.

A few days after the letter was published, the strikers at Bridgeport returned to work. A striker with that letter staring him in the face was practically under governmental compulsion. And yet neither in the issue of the American Federation's weekly news letter following the affair, nor in the October issue of the *Federationist*, nor in the subsequent issue of the machinists' official organ, the *Machinists' Monthly Journal*, was the President's course adversely criticized.

The indication of the whole trend of events seems to be that the national leaders in the American Federation in the latter part of 1918 were losing rather than strengthening their hold upon the local unions. The public on the other hand was reaching the conclusion, largely shared by many national labor leaders, that wages in war industries had advanced sufficiently to satisfy just demands; and that in view of the adjustments which could be expected from the War Labor

Board, interruptions to war industry by strikes were intolerable. Under such circumstances some sort of system for compulsory settlement of war labor disputes might have developed in America if the war had continued through 1919.

Two important labor adjustment agencies came into existence during the final ten months of the war — the National War Labor Board and the Railroad Administration's system for determining wages and conditions. In neither of them did the pledge of the international presidents to continuous production by the members of their respective unions appear as the foundation of control.

The President created the War Labor Board by proclamation on April 8, 1918. In February the Secretary of Labor had requested the managing directors of the National Industrial Conference Board, an employers' organization, to name five representatives of employers, and had also requested the President of the American Federation of Labor to name five representatives of labor; these ten men were to compose the War Labor Conference Board, which was to make recommendations for some system of labor adjustment and administration. The Board thus formed was augmented by Ex-President Taft, chosen to act as counsel for the employer group, and by Mr. Frank P. Walsh, formerly Chairman of the Federal Commission on Industrial Relations, acting similarly as counsel for the employee group. On March 29, 1918, this Board made to the Secretary of Labor its recommendation that there be established immediately a National War Labor Board of the same number and selected by the same agencies, "to promote and carry on mediation and adjustment in the field of production necessary for the effective conduct

of the War," except "where there is by agreement or by Federal law a means of settlement which has not been invoked." This recommendation was accompanied by a statement of principles (to be examined presently) agreed to unanimously by the Conference Board. On April 8, 1918, the President issued his proclamation formally establishing the War Labor Board.

On this new agency for labor control were five representatives of the American Federation of Labor, of whom two were international presidents, sitting in joint control of labor standards. Among the principles announced by the Conference Board in its report of March 29, was the statement: "There should be no strikes or lockouts during the war," — a principle to which the labor members of the National War Labor Board must be held to have committed themselves when they accepted appointment under the President's proclamation. But Mr. Johnston's adhesion to this principle as a "representative of labor" on the Board was very different from the same man's direct written pledge in the shipbuilding agreement, in his capacity as president of the International Association of Machinists, that disputes "shall" be submitted to an adjustment board and that "the decision of the board will, in so far as this memorandum may be capable of achieving such result, be final and binding upon all parties." It will be remembered how in October, 1917, several international presidents in the metal trades, bound by this written pledge, went on their own initiative to the Pacific coast, and, pitting their strength against a group of local union leaders, forced the return to work of employees in the shipyards at Seattle pending a consideration of their dispute by the Shipbuilding Labor Adjustment Board. If the national union leaders had been behind the National War Labor Board with similar pledges the

drastic action by the President in the Bridgeport case probably would never have been necessary.

But the National War Labor Board, altho it did not undertake through the medium of specific pledges, to strengthen the group of international presidents as an agency for control, did operate to strengthen immeasurably the general position of unionism in America. The President in his proclamation of April 8, 1918, declared that the War Labor Board was to observe the principles specified in the report of the War Labor Conference Board. Among the principles laid down in the Conference Board's report and thus made by the President's proclamation a basis for the work of the War Labor Board, were the following:

1. The right of the workers to organize in trade-unions and to bargain collectively through chosen representatives is recognized and affirmed. This right shall not be denied, abridged, or interfered with by the employers in any manner whatsoever.

2. The right of employers to organize in associations of groups and to bargain collectively through chosen representatives is recognized and affirmed. This right shall not be denied, abridged, or interfered with by the workers in any manner whatsoever.

3. Employers should not discharge workers for membership in trade-unions, nor for legitimate trade-union activities.

4. The workers in the exercise of their right to organize shall not use coercive measures of any kind to induce persons to join their organizations, nor to induce employers to bargain or deal therewith.

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1. In establishments where the union shop exists the same shall continue and the union standards as to wages, hours of labor, and other conditions of employment shall be maintained.

2. In establishments where union and nonunion men and women now work together, and the employer meets only with employees or representatives engaged in said establishments, the continuance of such condition shall not be deemed a grievance. This declaration, however, is not intended in any manner to deny the right or discourage the practice of the formation of labor unions, or the joining of the same by the workers in said establishments, as guaranteed in the last paragraph, nor to prevent the War Labor Board from urging, or any umpire from granting, under the machinery herein provided,

improvement of their situation in the matter of wages, hours of labor, or other conditions, as shall be found desirable from time to time.¹

Two ideas, namely, the right of workers to organize, and the shop committee idea, i. e., the meeting of employers with committees of the workers, were carried out in far-reaching ways during the few months of the War Labor Board's activity. As regards the recognition of the unions, the Board continuously refused to require an employer to enter into a contract with a union, as such, except in instances when a union contract had been in force prior to the submission of the controversy. The right of workmen to organize was sustained repeatedly. On August 1, in the Columbus Street Railway adjustment, the Board upheld the right of employees to display the union button; it frequently ordered the reinstatement of men discharged for union activities; it repeatedly discountenanced the individual restrictive contract with employees, and instead expressed itself in favor of the collective agreement.

The shop committee was promoted by the War Labor Board at every opportunity as the proper agency for collective bargaining. In some cases the form of this promotion did not go further than the bare finding that the employers must deal with committees of the workmen. In other cases the Board went so far as to prescribe the way in which the committees of the workers should be selected, as for instance in the following:

10. Election of Committees.

The election by the workers of their representative department committees to present grievances and mediate with the company shall be held, during the life of this award, in some convenient public building in the neighborhood of the plant, to be selected by the examiner of this board assigned to supervise the execution of this award, or, in the case of his absence, by some impartial person, a resident of

¹ Monthly Review, U. S. Bureau of Labor Statistics, May, 1918, pp. 56, 57.

Pittsfield, to be selected by such examiner. Such examiner, or his substitute, shall preside over the first and all subsequent elections during the life of this award, and have the power to make the proper regulations to secure absolute fairness.

In the elections the examiner shall provide, wherever practicable, for the minority representation by limiting the right of each voter to a vote for less than the total number of the committee to be selected. Elections shall be held annually.¹

This sketch may suffice to indicate the scope of the War Labor Board and the nature of its work. As a force for industrial peace and continuity of production in war, it played a notable part. Unquestionably such restraining influence as it was able to exert was due in the main to the spirit both of employers and employees during the national emergency. What use can be made in the coming period of its basic principles and of its technique is a question. The extent to which labor groups are willing to be controlled in their collective bargaining will in the last analysis determine the issue. Possibly they will agree to governmental control when its exercise is vested partly in their own national representatives. The shipbuilding type of labor adjustment, based on the pledge of the leaders of the national unions, gives promise of being used in peace time. In it lie perhaps the germs both of a sound democratization of labor control and of a conscious collective responsibility of labor to the community at large. But this, as well as the War Labor Board's work itself, is mainly educational. Both have broken down some of the barriers between management and labor.

The other important adjustment machinery developed by the government during the last ten months of the war, namely, that in the Railroad Administration, is of considerable magnitude. As distinguished

¹ Findings of joint chairmen as arbitrators in re *Employees v. General Electric Co., Pittsfield Works*, July 31, 1918.

from the somewhat more fortuitous machinery of the War Labor Board, it was planned in advance with great thoroughness. The outstanding features of the labor administration of the railroads are, first, the laying of a foundation of standard wages and working conditions in advance by a board composed exclusively of government appointees, not one of whom was a representative of labor; second, the omission of mention, in the basic documents, of a union or a union standard, altho the system for further standardization and for adjustments in individual cases is largely dependent upon the action of persons selected from among the unions for service as officials; and third, the right of appeal to the Director General, from the decisions of the boards whose function it is to change the basic standards and to interpret and apply them. These boards are made up equally of representatives of capital and labor, and their decisions must in any event be approved by the Director General; they are thus reduced to the status of agencies merely advisory.

Altho the standards thus established and the scope allowed to the unions have greatly improved the relations between labor and management, the arrangements leave labor no final voice in the determination of standards. As compared with the War Labor Board, the labor adjustment system in the Railroad Administration, from the point of view of institutional development, is distinctly conservative.

So much by way of general analysis. The steps taken in creating this important system of railroad labor adjustment were in detail as follows. At the very outset of his administration, the Director General had averted certain threatened strikes by entering into preliminary arrangements with union leaders.¹ On January 19,

¹ See this Journal for February, 1918, p. 362.

1918, a few days later, he appointed a Railroad Wage Commission, of four men — Secretary Lane of the Department of the Interior, Charles C. McChord of the Interstate Commerce Commission, J. Harry Covington, Chief Justice of the Supreme Court of the District of Columbia, and William R. Wilcox, of New York. The Commission was directed to "make a general investigation of the compensation of persons in the railroad service, the relation of railroad wages to wages in other industries, the conditions respecting wages in different parts of the country, the special emergency respecting wages which exists at this time owing to war conditions and the high cost of living, as well as the relation between different classes of railroad labor." On April 30, 1918, this Commission made its report. It took account of all railroad employees, whether manual or clerical, receiving less than \$3000 per annum. It found that "the man who received \$85 a month on January 1, 1916, now needs 40 per cent additional to his wage to give him the same living that he had then." It recommended a detailed sliding scale of increases, under which, for instance, an employee receiving \$50 per month would receive an increase of \$21.60; a \$150 per month employee, an increase of \$24.25; and a \$245 per month employee, an increase of \$5.00.

On May 25, 1918, the Director General of Railroads adopted in the main this sliding scale basis of increase as recommended by the Wage Commission and at the same time established the Board of Railroad Wages and Working Conditions, naming its six members, three of whom are railroad officials and three trade union officials. This Board was to investigate inequalities effected by the new scale, competition with employees in other industries, and rules and working conditions. By the terms of the order creating it, it was to be solely

an advisory body and was to submit its recommendations to the Director General for his determination. Its activity has consisted largely in making decisions on interpretations of the orders and rulings of the Railroad Administration respecting labor.

In addition to this general board, other agencies have been set up for the several groups of employees. Three separate boards of adjustment have been established, each composed of eight members, of whom four are designated by the railroad managements and four by the unions interested in the jurisdiction of such board. Board No. 1 has to do with "train service employees," such as engineers, firemen, conductors, trainmen, switchmen — employments covered by the "Big Four," or Railroad Brotherhoods. Board No. 2's jurisdiction is over the railroad shops — employments covered by the "Mechanical Department of the Railway Employees Department" of the American Federation of Labor. Board No. 3 is concerned with telegraphers and maintenance-of-way clerical and station employees. To a fourth board are left on appeal such local disputes as do not come up through channels of organized labor. It consists of the two assistant directors of the Division of Labor — the first for a number of years a government officer as a member of the United States Board of Mediation and Conciliation, the second until recently a president of one of the metal trades international unions. Finally, grievances of women workers follow a fifth course, being handled directly by the Director of the Division of Labor.

Besides having for their bases in general a wage scale increase determined upon by the Wage Commission, Adjustment Boards Nos. 1, 2 and 3 have for their guidance certain direct agreements between the Railroad Administration and union officials. Thus on March 22,

1918, the three regional directors entered into a written agreement with the chiefs of the four Brotherhoods (the "Big Four") that the wages and hours as determined by the Director General were to be incorporated into existing wage agreements between the railroads and the Brotherhoods; and that "matters of controversies arising from interpretations of wage agreements shall be decided by the Railway Board of Adjustment." Adjustment Board No. 2, with jurisdiction over grievances of the "Railroad Shopmen" of the American Federation of Labor, was, like Adjustment Board No. 1, arranged for before the standardization of wages by the Wage Commission had been announced. On February 20 the Director General and this union group, through its president, entered into an agreement under which, irrespective of existing agreements to the contrary, relaxation might be effected in working hours in cases of necessity, and also changes in the conditions under which the ratio of helpers and apprentices to journeymen might be increased. Up to the present time Board No. 1 has decided about 400 cases, Board No. 2 about 100, and Board No. 3, established in the middle of November, only a few.

But probably the most important contribution of the Railroad Administration's labor adjustment system has been its successful promotion of local shop committees. The March 22 agreement with the Brotherhoods contained the following provision about the handling of grievances:

10. Personal grievances or controversies arising under interpretation of wage agreements, and all other disputes arising between officials of a railroad and its employees, covered by this understanding, will be handled in their usual manner by general committees of the employees up to and including the chief operating officer of the railroad (or some one officially designated by him), when, if an agreement is not reached, the chairman of the general committee of

employees may refer the matter to the chief executive officer of the organization concerned, and if the contention of the employees' committee is approved by such executive officer, then the chief operating officer of the railroad and the chief executive officer of the organization concerned shall refer the matter, with all supporting papers, to the Director of the Division of Labor of the United States Railroad Administration, who will in turn present the case to the Railway Board of Adjustment No. 1, which board shall promptly hear and decide the case, giving due notice to the chief operating officer of the railroad interested and to the chief executive officer of the organization concerned of the time set for hearing.

11. No matter will be considered by the Railway Board of Adjustment No. 1, unless officially referred to it in the manner herein prescribed.

12. In hearings before the Railway Board of Adjustment No. 1, in matters properly submitted for its consideration, the railroad shall be represented by such person or persons as may be designated by the chief operating officer, and the employees shall be represented by such person or persons as may be designated by the chief executive officer of the organization concerned. (U. S. Railroad Administration, General Order No. 13.)

Substantially similar rules govern all appeals for adjustment by the adjustment boards. Bona fide resort to shop committee procedure is required before the assistance of the Director of the Division of Labor can be invoked. The result has been that the vast majority of grievances never reach him, and that local railroad management and local railroad labor over the country are becoming to an increasing degree habituated to frank, thoro discussion of grievances and to their equitable and amicable adjustment.

As might be expected, the exercise by the railway unions, both manual and clerical, of these important advisory functions in railroad labor policies has greatly increased their membership and influence. Railroads upon which unionism had never obtained a real foothold prior to 1918 have seen the establishment of unions or their great increase. This has been particularly true of the railroad shopmen and of the clerks.

In any endeavor to appraise the developments in labor adjustment during the war for their effect upon after-war conditions, we are confronted with so many variables, both political and industrial, that no estimate can be made with assurance. But we may take the features of control in the order of their apparent chances of survival. The local shop committee has been planted so well and so broadly throughout industry by these various governmental adjustment agencies as hardly to seem eradicable. Promoted from the outset by the Shipbuilding Labor Adjustment Board, later by the President's Mediation Commission in the Arizona Copper district, and in the packing establishments, firmly established subsequently by the War Labor Board in widely divergent fields of industrial activity which had never known its use, and finally made a thoroly integrated part of a machinery for adjustment extending over the entire American railroad system, the shop committee has secured a strong position. And it has on the whole been accepted by organized labor with willingness. Is it not likely to prove a permanent element, fixed in American industrial life by the events of the war?¹ Whatever reaction is to be expected toward pre-war industrial relations could hardly sweep away a method so widely employed and in essence so akin to the genius of American institutions.

But as regards final appeal in disputes, and restraint during and after adjudication — how will these develop after the war? Of the three principal new types of machinery which were evolved during the war, only one was designed both to handle disputes and to supply with some effectiveness the element of restraint in the use of

¹ A significant indication is the establishment on January 7, 1919 of a thorogoin system of shop councils, with a joint board of appeal, by agreement between the Bethlehem Shipbuilding Corporation and the Metal Trades' Department of the American Federation of Labor.

the strike, namely, the Shipbuilding Labor Adjustment Board type. Here the chief union representatives agreed, each for his union, that production would be continuous, both during and after adjudication. But the motives which made this arrangement possible have no equivalent which is apparent at this time and which would induce the unions to bargain away their chief weapon, the strike. And yet, if they should be given an equal voice with the employer in the determination of labor standards, it cannot be said that some such political-industrial arrangement is impossible.

As regards the establishment of quasi-judicial machinery for wage determination, the three types which emerged under war conditions varied in important particulars. The three types are the War Labor Board, the shipbuilding arrangement, and the railroad adjustment system. In the first two, management and labor both placed the settlement of their disputes in the hands of a board on which the opposing interests were equally represented. In the War Labor Board no method was devised for breaking a deadlock between the two sets of representatives; they were forced to reach some sort of settlement, and the advantage naturally tended to remain with the labor group, which retained its right to strike. In the shipbuilding type, on the other hand, a supposedly neutral member, appointed by the government, cast the deciding vote. Finally, in the railroad adjustment system, disputes were left to a board again constituted of an equal number of representatives from both sides, but established directly by the railroad management itself; the railroad management moreover reserved and continues to reserve final decision for itself; it has in its own hands the control of labor standards. In any event we may expect the wage board of the future to be more independent of the management

than is the Railroad Administration type today. As between the balanced board and the board in which a neutral member turns the scale, the issue might perhaps come to depend upon the political strength of labor, if the government should continue to promote adjustment of industrial disputes.

Quite a different development, as to after-war survival, is that of the Federal Employment Service. As a federal agency for stabilizing employment for labor it is evidently marked for survival in some form. The final establishment of this work has not been by means of executive action or by semi-official emergency agreements, but through the firm basis of statute.

The statute of 1913 creating the Department of Labor set forth the activities in which it could engage — immigration and naturalization, labor statistics, and mediation. There was no mention of labor exchange work, despite the fact that unemployment was then a pressing problem and that a number of the states, following European example, were establishing state employment agencies. Doubtless one reason for this omission was the uncertainty of legal justification which must be faced by any federal activity, other than transportation, which undertakes to operate within a state. Obviously, an employment office operating at a given point could hardly limit itself to interstate operations by placing applicants in positions in other states only.

Unemployment relief, however, made its own way into the Department of Labor without the aid of Congress. During the three years preceding 1917, the Secretary of Labor made the Bureau of Immigration the vehicle for an employment service which established offices at a number of points and gave useful service, operating generally apart from the state and municipal

agencies. The entrance of the United States into the war, however, and the consequent serious problems of labor supply, brought the local and federal agencies together, especially after October 6, 1917, when Congress for the first time recognized this extra-legal work of the Department, and impliedly sanctioned it, by appropriating \$250,000 for its prosecution. The President out of his own emergency fund allotted the further sum of \$825,000.

It was high time for Congress to take a hand in the labor exchange situation. Two disturbing factors particularly called for general direction and management, free from private and local interest. Out of the unprecedented scramble for unskilled labor had emerged the phenomenon of state laws which prohibited the employing of persons in one state to work in another. Altho laws of this form were clearly unconstitutional and were eventually held to be so, they were not without effect, and occasionally prevented the natural flow of labor to the points where it was most needed. The prosecutions, the summary exercise of local authority, and the violent activity at various points, especially in the South, directed toward preventing the departure of negro laborers, would make an interesting chapter in American war labor history. The other element contributing to the confusion was the private employment agency. The pernicious practices often attendant on this business had largely influenced the establishment of the public agencies, and also the enactment of the embargo laws on the exportation of labor. In the state of Washington a few years ago a law was enacted designed to bring about the extinction of such agencies. Tho held unconstitutional by a divided United States Supreme Court, the terms of the decision were such as probably to leave the way open for state laws which

would effect the same purpose. The private agencies by their irresponsible methods of advertisement and solicitation became, as the war progressed into 1918, an increasing source of disturbance.

On March 28, 1918, following up its action in the preceding October, Congress appropriated \$250,000 "to enable the Secretary of Labor to advance to wage earners transportation to such places as may be deemed necessary for the purpose of securing employment in connection with the prosecution of the war," and on July 1, 1918, took the decisive step of appropriating five and a half million dollars to be available for employment service. With such support, and with the urgency of the labor supply problem, the United States Employment Service — with its multitudinous employment offices at principal industrial points; its supplementary recruiting arm, the Public Service Reserve, reaching out into smaller communities; its Farm Service Division; its Women's Division; and its Boys' Working Reserve — had by the autumn of 1918 built up a huge if cumbrous machine and had materially assisted in the adjustment of the labor supply.

The position of the Employment Service was much strengthened when the President on June 17, 1918, issued a proclamation, in which he called upon employers over the country, engaged in war work, not to recruit unskilled labor through any private agency but, beginning with August 1, to rely upon the federal service. A great effort was begun to organize the service up to taking on this responsibility, offices being established in great numbers. At the same time the War Labor Policies Board, a council in the Department of Labor composed of representatives of the various federal war agencies, planned the geographical distribution of industrial committees all over the country,

and the creation for each community of a labor board. These community labor boards were to be boards of three, the chairman being the local representative of the Employment Service, and his associates selected one by the employers, and one either by the organized workers of the community, or in the absence of an organization by unorganized workers. Each board was to work under the general direction of the Public Service Reserve director for the state, in recruiting and distributing labor in each community. The principal objects behind this plan were first that the needs of the great war industries for common labor should be met by drawing to a considerable extent upon the less essential and non-essential industries, and second that through a central machinery, run without the motive of private interest, placements of men could be made with sufficient care to fitness to cut down the mounting index of labor "turn-over." Altho the plan was based entirely upon voluntary appeal, it effected at once a considerable decline in the use of newspaper advertising and of private agencies in recruiting labor, and had good results in the number of laborers obtained.

Altho the plan was never extended to skilled labor, the larger newspapers and industries of the country co-operated with the Employment Service by referring all applicants answering their advertisements to the United States Employment Service and by not advertising their wage rates publicly as inducements. But the activities of the private agencies and of the recruiting managers of large plants continued with no abatement, and with them the progressive, almost furious, contest in competing wage rates.

Such was the Employment Service in November, when the news of the armistice descended upon America. This agency, in its infancy in the spring of 1917, with

no real legal status or financial support, had become eighteen months later the great official labor supply agency of the country. The state employment services, even those which had attained some degree of stability and usefulness, had lost, temporarily at least, their influence.

What will be the future of this branch of federal service? It would seem that nothing short of an incredible reaction toward decentralization could push the Department of Labor back to its old position. It will be remembered that the American Association for Labor Legislation in the winter of 1917-18 was promoting a bill to bring about a partnership between the federal government and the states in the operation of employment changes. Another bill of similar nature is now proposed or pending. But the idea of exclusively federal activity in this field has in the meantime gained such momentum, that the new bill will have to meet the attacks both from the believers in unhampered state powers and from the reinforced adherents of exclusive federal control. Whatever the outcome, it will certainly bring with it the establishment of an important labor exchange function in the Department of Labor. And it would seem safe to predict that the federal government's work in this service will in the next decade become progressively of more importance.

The contrivances for labor control and adjustment discussed in this paper and the two preceding are the outstanding labor developments of the war. They grew in the main spontaneously, separately, without emanating from any central plan. Most of them were late in being created. The government contracts were never so administered as to make possible any real steadying of the labor situation. Had it not been for real faith among

the workmen in the President's sincere and wise concern for their welfare, and for the patriotism which checked class issues as the war progressed, the success of the several arrangements would have doubtless been far less than it was. What might have happened during another year of war is mere matter for speculation. We can at any rate say that the grave issue of compulsory arbitration was avoided; that employers and leaders of organized labor, through the agency of the federal government, in thousands of instances conferred together over wages and conditions, both in the shops and in higher joint tribunals; and that some of the principles which have been established seem to have in them too much of value to stand in danger of being lost.

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FOUR LABOR PROGRAMS

SUMMARY

The four programs described, 344. — The balancing-up program, 346. — Necessity of a balance among factors of production, 346. — Laws of value sometimes independent of social institutions, 347. — Institutions affect value of consumers' goods mainly, they scarcely affect relative values of factors of production, 351. — A slightly unbalanced population makes a collective bargaining program certain, 360. — A badly unbalanced population makes a voting program certain, 362. — An extremely unbalanced population makes a fighting program certain, 366.

ALL programs for the improvement of the condition of the wage workers fall into four general classes, tho there are many combinations and mixtures of these four. For the sake of brevity these four classes may be arranged as follows:

Programs depending upon voluntary agreements among free citizens.

I. The balancing-up programs.

II. The collective bargaining programs.

Programs depending upon authority and compulsion.

III. The voting programs.

IV. The fighting programs.

By the balancing-up programs are meant all programs which aim to create or restore a balance among occupations so as to give those in one occupation the ability to bargain to their advantage as effectively as those in any other occupation. Such a program would aim to enable the unskilled worker, as an independent bargainer, to prosper as well as the skilled worker, the technician, the business manager, or the capitalist. It would aim to equalize the prosperity of different classes

by first equalizing bargaining power, so that each occupational class could, by the simple process of voluntary agreement among free and equal citizens, gain as many advantages as any other occupational class. This would combine equality with individual liberty and initiative. It would leave the individual free to make his own arrangements with other individuals or groups of individuals, every one acting voluntarily and without any compulsion whatsoever. Compulsion would be exercised only to compel the fulfilment of agreements voluntarily entered into, never to compel individuals to enter into business arrangements against their will.

By the collective bargaining program is meant a program under which individuals voluntarily join associations and surrender to the association the power to make business arrangements and agreements for themselves. So long as no force or threats of force are used to compel the individual to join such an association, or to prevent his withdrawing from it, such a program is voluntary and not compulsory. Voluntary agreements among free citizens remain the basis of organization rather than the authority and compulsion of the state or any other organization. This is the type of business organization which has prevailed in free countries under liberal governments.

By the voting programs are meant all programs where the wage workers are to use their voting strength to get control of the government and then use the compulsory power of the government to give them what they want. Much of our social legislation and all programs of state socialism fall in this class.

By the fighting programs are meant all programs under which the wage workers are to use their fighting strength to get what they want, without waiting for the slow process of gaining control of the government by the

constitutional methods of voting. These fighting programs are sometimes called by the more euphonious name of "direct action." Sabotage, strikes accompanied by violence or threats of violence, syndicalism of the more extreme sort, much of the program of the I. W. W., as well as that of Bolshevism, falls in this class.

The purpose of this article is to point out the relation of each of these programs to the others and to the general economic background. It is the belief of the writer that each program is the logical and inevitable outcome of general economic conditions, that one who understands these conditions in any time and place can predict, with some approach to certainty which of the four will be the dominant program, and that the determining factor in each case will be the balance or lack of balance among the various factors of production, human and non-human.

I. THE BALANCING-UP PROGRAM.

The idea is too prevalent that bad economic conditions are always and necessarily the fault of some person or some institution, and that the remedy is therefore the punishment of the guilty person or the reform of the defective institution. The fact is that many bad economic conditions grow out of lack of balance among the various factors which have to be combined to get any large economic result. An unbalanced ration means poor nutrition, an unbalanced soil means poor crops, an unbalanced business organization, say a farm, where there is too much land or not enough labor or equipment to cultivate it, means inefficient production, and, finally, an unbalanced nation, which has too much labor and too little capital, too much population and not enough land, too much of one kind of labor and not enough of another

kind to work effectively with it, or any other of an infinite number of possible bad combinations, means ineffective production and is likely to mean a bad distribution of products.

The laws of value, instead of depending, as some would have us believe, upon a whimsical psychology, or an accidental institutional background, are frequently adaptations to the physical facts connected with this problem of balance. If a man is consuming a ration with too much starch and too little protein, his craving for foods rich in protein will increase and for foods rich in starch will decrease regardless of the prevailing school of psychology or the institutional background. This increase in the craving for protein and decrease in the craving for starch will have some bearing not only upon his relative valuation of different foods, but also upon the relative prices which he will be willing to pay for them. If the relative supply on the market of food of the two kinds is such as to make everybody crave foods rich in protein and not crave foods rich in starch, that fact is likely to influence the relative market prices of the two kinds of food. The price is an adaptation to the physiological situation and not to the institutional background. Even under communism, where no open market was allowed to exist, if the one kind of food became scarcer than the other, it would be pretty difficult to prevent people from giving expression to their craving for protein by trying hard to get more of it, either by surreptitious bartering or by stealing.

The farmer whose soil is unbalanced, say with too much nitrogen and too little potash, and who observes that the use of a fertilizer rich in nitrogen adds little or nothing to his crop, whereas the use of a fertilizer rich in potash adds considerably to his crop, is pretty certain to feel a stronger desire for potash than for nitrogen.

Granting that he wants a large crop, the preference for potash as against nitrogen does not depend upon the prevailing psychology nor upon the institutional background. The fact that a larger crop follows the addition of a certain quantity of potash to that already in the soil, whereas the addition of an equal quantity of nitrogen to that already there is not followed by a noticeable increase of the crop, is a physical and not a social or a psychological fact. Even a communistic society, if it perceived that its soil was thus unbalanced, and if it knew that it needed *additional* potash more than it needed *additional* nitrogen, would doubtless make greater effort to get potash than to get nitrogen, tho it might not be wise enough to adopt the simple expedient of allowing people to offer a higher price for the one than for the other.

This principle applies to the ratio of population to land, or to equipment, or to the ratio of different kinds of labor to one another, as well as to the different food elements in a ration or the different elements of plant growth in the soil. A community, whether communistic, individualistic or otherwise, in which there was an abundance of land and labor, but little equipment, would feel the need of *additional* equipment more than of *additional* land or labor. This feeling would be based upon the observation of a physical fact, namely that, with its limited equipment, a few additional acres brought under cultivation would add little or nothing to the total product because there was not equipment enough to cultivate properly the land already in cultivation. Similarly the addition of a few laborers would add very little to the crop because of the lack of sufficient tools for those already at work. But the addition of a few tools and implements of the proper sort would enable the laborers to work to better advantage, and to

cultivate the land more satisfactorily and would therefore result in a larger crop. If, on the other hand, there was an excess of good tools and a scarcity of either labor or land, the community would not desire additional tools so intensely as it would desire additional labor or land. The reason in this as in the other case would be physical rather than social, institutional, or psychological. It would be based upon the observation that a large increase of product followed every addition to its labor or land, whereas no such increase followed an addition to its stock of tools. This would be as true in a communistic as in an individualistic society. It would require rather severe repression to prevent men from giving expression to their desires by offering a high price on the one hand and a low price on the other. If men were permitted to barter, or to buy and sell freely, that is unless these operations were positively repressed, prices would adjust themselves to this fact without the shadow of a doubt.

As suggested above, this principle applies also to the ratio among the different kinds of labor and among the different kinds of equipment. In a community where there were more horses than were needed to pull all the plows, harrows and other implements that were to be had, it would add very little to the crops to add a few horses to the existing stock, but it would add considerably to the crop if a few plows, harrows and other implements could be added. Opposite results would follow, of course, if it should happen that there were more plows, harrows and other implements than the existing stock of horses could pull. Again, if in a cotton mill town there were more spinners than were needed to supply yarn to the weavers, it would not add much to the total output if a few more spinners should appear on the scene, whereas if a few more weavers were to appear, it

would make a great deal of difference. Under such circumstances, it would be more advantageous to the community, assuming that it wanted cotton cloth, to add to its corps of weavers than to add to its corps of spinners. This advantage would, if it were understood, lead to a stronger desire for more weavers than for more spinners. One way to get more would be to offer a higher wage. This is not the only way — weavers could, for example, be conscripted as soldiers are. Liberal communities have generally preferred the less drastic method of offering a higher wage for the kind of labor which is scarcer in proportion to the need for it. This would result in an uneven distribution of the product of the cotton industry.

It is true, of course, that this lack of balance between the number of spinners and the number of weavers could not last very long. Between those two occupations there is no great gulf fixed. The balance would soon be restored, if it were ever destroyed, by the habit of seeking the more attractive occupation. But there is a much wider gulf fixed between other occupations, between, for example, such occupations as that of unskilled laborers and employers, between bookkeepers and general managers, etc. In such cases it is not easy to preserve a perfect balance, and consequently an industry may remain for a long time in an unbalanced condition as respects such occupations as these.

It goes without saying that the necessity for a balance among the various factors of nutrition and production is a physical or a physiological necessity. It goes deeper than fashion; it is more fundamental than any human institution. Many of the laws of the market are based upon this necessity, and the market itself as an institution is an organized attempt to adjust ourselves to it. Many other human institutions, instead of being a back-

ground for the laws of value, are merely outgrowths of these laws.

There are, to be sure, other cases where convention, custom, fashion or whim is a determining factor in value. In all such cases it may with justice be said that a knowledge of the institutional background is necessary to an understanding of the phenomena of value. For example, the Mohammedan's abhorrence of pork is wholly an institutional affair. But whether one were Mohammedan, Jew, or Christian, would not make the slightest difference in the results of a feeding experiment. If a pig were given too much starch and too little protein, and it were found that adding protein would add considerably to his growth, whereas adding starch would not, we should be dealing with a physical fact. In short, our institutional background affects mainly our valuation of pork rather than the relative valuation of different factors in pork production. In general, institutions may be said to affect our valuations of consumers' goods rather than of productive agents. The relative values of productive agents is determined almost exclusively by the physical and objective facts relating to their balance or lack of balance in the physical process of production.

So far as the labor market is concerned, customs, traditions and institutions have their principal effect first, on the incomes of those classes which Mill and other economists denominated as unproductive laborers, that is, of those who render direct personal service and do not aid in producing vendible commodities; second, on the incomes of those who, without coöperation, produce a complete consumable commodity. The first includes barbers, valets, servants, physicians, lawyers, teachers, preachers and a multitude of others. Whether barbers flourish or not will depend, of course, somewhat upon

styles. Whether physicians of various schools earn good incomes or not will depend upon a multitude of circumstances, including the habits of the people, the repute in which the various schools are held, etc. Similar observations could be made regarding all other classes who render direct personal service. Institutions affect the value of their services very much as they do the value of consumers' goods. But granting that a consumer's good is sufficiently desired to give it a price on the market, then the relative value of the factors which enter into its production is mainly a question of physical fact which can be ascertained by physical experiment. If a teetotaler who abhorred whiskey could bring himself to manufacture whiskey for the market, if a Quaker who abhorred jewelry could bring himself to manufacture jewelry, or if a Mohammedan who abhorred pork could bring himself to produce pork, he would reach the same conclusions, in any given time and place, as to the relative value of the different factors of production as would be reached by any other producer of equal intelligence.

The second group, that consisting of individuals who, unaided and without coöperation, produce consumable commodities in complete form, is almost negligible. The fisherman who sells his individual catch may be cited as an example.

The labor problems which are acute at the present time relate to the compensation of labor which works in combination with many other factors in production.

Those laborers who render direct personal service and those who produce by individual effort alone sometimes have their grievances. These grievances occasionally give rise to what may be called a special social problem, but such problems differ materially from those labor problems in which the public is now chiefly interested. These problems are all more or less directly concerned

with the question of sharing the products of those industries which combine many factors, including not simply labor, land, and capital, but many kinds of labor and many kinds of capital. This is precisely the kind of a problem with which psychology, custom, tradition, government, religion and other institutions have very little to do directly, tho they may exert a great deal of indirect influence. This problem resembles that of the relative importance to plant growth, in a given situation, of various elements in soil fertility, of the relative importance to animal growth, in a given ration, of the various elements of animal nutrition, of the relative importance to farm production, in a given combination of productive factors, of different items in the equipment. It is a question of physical fact which could, in any case, be determined by physical experimentation if any one were willing to go to the expense of running the experiment station.

This is always a question of having *more* or *less* of a given element, and not of having *some* or *none* of it, in a given combination. In a given soil, it is a question of the importance of having more or less nitrogen, not a question of having some nitrogen or none at all, which interests the real farmer. The "flower-in-the-crannied-wall" philosopher would doubtless say that, "absolutely speaking," or in terms of the "higher logic," nitrogen is no more important to plant growth than silica or a number of other soil ingredients. The scientific farmer knows that his soil generally contains all the silica his crops can possibly use, and some more besides, and that therefore it would not be good economy to buy any more. He also knows that in most soils there is less available nitrogen than his crops can use and that a little more nitrogen would be followed by a little more crop. When he is certain of that, the kind of logic which he

needs in his business will lead him to buy nitrogen provided its price is not above that of the expected increase in his crop.

A fertilizer company has recently been in actual operation in New England, trying to sell a fertilizer containing none of the elements of plant food which farmers ordinarily buy, but very rich in silica, that is, sand! This company published statements of scientific men to the effect that plants required silica for their best growth. It could probably have been demonstrated that a soil absolutely devoid of silica would not grow crops at all. Therefore, some would argue, silica is the great producer of crops. This argument might be sufficient to satisfy the demands of "the higher logic," but it was not sufficient to satisfy the demands of scientific farmers, nor did it prove to be sufficient to satisfy the court, nor to keep the promoters of this company out of jail.

It was suggested above that while institutions could have very little direct influence upon a problem of this kind, they could have considerable indirect influence. In a community where soils need more nitrogen to secure better crops, but do not need more silica, institutions could scarcely succeed directly in giving nitrogen and silica equal values. They might succeed indirectly if they could set forces to work which would make soil nitrogen as abundant as silica, or silica as scarce as soil nitrogen. In a community where foods rich in protein were physically scarce relatively to needs, whereas foods rich in starch were physically abundant, institutions could scarcely succeed directly in giving equal values to various kinds of food. If the government or any other institution could set forces to work which would make different kinds of food equally abundant or equally scarce, the equality of values would take care of itself.

Such a program could properly be called a balancing-up program.

This balancing-up program may be vastly extended. Governments, schools, and other institutions may easily set forces to work which will accelerate the accumulation of capital, and eventually make it so abundant relatively to land and labor as to give capital a smaller and labor or land a larger share in distribution. Forces may also be set to work which will spread population over wider areas, reduce the intensity of the demand for favored locations and reduce rent, leaving larger shares to the other factors. It would be very easy to set forces to work which would reduce the number of unskilled laborers and increase the supply of employing talent. This would automatically result in some approach to equality, at least it would result in higher wages for unskilled labor and lower incomes for the employing classes. If carried far enough, a balancing-up program would give us something approximating to equality of income without sacrificing individual freedom.

A social system in which each free individual made his own business adjustments on the basis of voluntary agreement with other free individuals, and where, in addition to this universal freedom there was universal and approximately equal prosperity, would certainly be more desirable than a system which secured liberty without equal prosperity or equal prosperity without liberty. The balancing-up program is the only program which can possibly give us both. All other programs sacrifice one or the other.

In order to make capital so abundant as to reduce the share of the capitalist class and increase the share of the laboring class we need, first and foremost, a general, aggressive and permanent thrift campaign. The twin virtues of thrift and industry have been very unequally

cultivated in almost every community. While thrift is quite as important as industry to national prosperity, it has by no means received the encouragement that industry has received. Training for industry has been provided at public and private expense, every kind of social and moral pressure has been brought to bear upon the young to be industrious. No one has commended the idle man, but many have commended thriftlessness and extravagance. Advertisers and salesmen have never exercised their arts and blandishments to induce men to be idle, but they have done much to induce men to be thriftless and extravagant. Only a few agencies have been working effectively to induce men to save and invest their incomes. One very important step would be taken toward balancing things up, if as many encouragements and temptations and as much social and moral pressure could be brought to bear upon men to induce them to save as are now brought to bear to induce them to work.

He who saves money, and invests it wisely, does himself good in two ways. He gains directly by having an income in addition to his wages or his salary. He gains indirectly by making better conditions for everybody including himself.

It is easy to see that he gains directly. To have a hundred dollars invested, at four and one-quarter per cent, is better than not to have it. It gives him four dollars and twenty-five cents a year over and above his other income; and four dollars and twenty-five cents a year, small as it is, is not a sum to be despised.

It is not so easy to see, but it is none the less true, that saving and wise investing make conditions better for everybody including oneself. Show me a community where there is little saving and investing and I will show you a community where conditions are bad, however

rich it may be in natural resources. It is always a community in which there is little employment and low wages. It is always a community from which laborers emigrate in order to find more employment and better wages. On the other hand, show me a community where there is a great deal of saving and investing and I will show you a community where conditions are good, where there is much employment and good wages, a community to which laborers from other communities come in large numbers in order to find work.

There are good and sound reasons for the historical fact that conditions are good where there is much saving and investing, and bad where there is little saving and investing. To save and invest is not to hoard. It is to buy things which are needed for production instead of things which are good only for consumption. To buy things, such as tools, machines, buildings, etc., which aid in production is to encourage the production of such things. When many people are investing in such things, many will be produced and industry will then be well equipped with aids to production. In short, there will be many factories well equipped with buildings, machines, and materials. That is a condition in which there is much employment.

One may buy either directly or indirectly those things which aid in production. When a farmer buys a traction engine rather than a luxurious automobile he is buying directly a thing which aids in production rather than an article of consumption. If he has bought wisely, the traction engine will aid him to grow a larger crop, which is a good thing for him. It will also increase the food supply, which is a good thing for everybody. The more farmers there are who save money and invest it in instruments which aid in production, the better production we shall have and the better the world will be fed.

When a factory owner builds an addition to his factory rather than a new dwelling-house he is buying directly various things which aid in production. If he builds wisely he will add to his income, which is a good thing for him. It will also add to the productive power of the community, which is a good thing for everybody. It is a good thing especially for laborers, because it will require more laborers to run the enlarged factory than were required before it was enlarged. In short, it increases the demand for labor.

The more people there are who save their money and buy tractors, machines, factory buildings, and all other aids to production, the better the community will be supplied with all such things. The better the community is supplied with all such things, the greater its productive power, and the greater the opportunities for productive employment. That is the reason why laborers always emigrate from a country where there is little saving and investing to a country where there is much saving and investing.

But one may buy indirectly things which aid in production. When one deposits money in a savings bank, the bank will invest it. It may lend it to some farmer who wants to buy a tractor, a team, a cow, or some other aid to production. It may buy part ownership in some factory, or in some other way encourage the buying of aids to production. In all these ways, and in many others, one may buy indirectly all sorts of things which aid in production.

Indirect buying of such things has the same effect as direct buying. It encourages others to make the tools, machines, buildings, and other things which aid in production. Nobody would make such things unless somebody would buy and pay for them. The only people who buy and pay for them are they who save and invest,

who buy fewer articles of consumption than they might buy, and spend the money thus saved for things which aid in production. That is what it means to save and invest.

Some of the most needed investments in time of war are War Savings Stamps and Liberty Bonds. To own a Liberty Bond is certainly better than not to own it. It is not only better for the individual, it is also very much better for the whole country and the world that individuals should buy Liberty Bonds than that they should buy articles of consumption which they do not really need, even tho they would like very much to have them. If they buy Liberty Bonds, the government will spend that money to hire men to build ships, make guns and ammunition, and do whatever else is necessary for the defense of the liberty of the world. It is better for everybody that men should spend their money indirectly for these things than that they should spend it directly for some article of consumption which they do not really need.

In time of peace it is almost as desirable from the standpoint of the world that the individual should buy, either directly or indirectly, aids to production as that he should, in time of war, buy aids to warfare with his surplus income. Let us suppose that two communities have equal incomes and are able, at a given time, to spend equal amounts of money this year in purchasing goods or hiring labor to make goods. Let us suppose that Community A spends all its clear income this year on consumers' goods, spending only enough on producers' goods to keep its supply of capital intact, whereas Community B spends half its clear income this year on producers' goods, and only half on consumers' goods. There will be as many goods purchased this year, and as much labor employed in Community B as in Com-

munity A. The difference will be that half the available labor power in Community B will be employed in making producers' goods, whereas all the available labor power in Community A will be employed in making consumers' goods.

Next year, however, Community B will be better equipped with producers' goods than Community A. Its total product, that is, its real income, will be larger than Community A's. It will have more to spend and will be able to employ more labor or employ it to better advantage. If it continues spending half its enlarged income on producers' goods, adding largely to its productive equipment from year to year, it will outstrip Community A and leave it farther and farther behind. In a short time laborers from Community A will be migrating to Community B, where there is more employment and better wages.

The different items in a balancing-up program need not be discussed in detail. Most of them will occur to any economist who will give the subject a little thought. The author has previously outlined such a program in a book entitled *Essays in Social Justice*.¹

II. THE COLLECTIVE BARGAINING PROGRAM

The indispensable man can generally get what he wants by the method of voluntary agreement. The superfluous man will have difficulty. To the man who, in any industrial situation, is indispensable, freedom means freedom to prosper. To the superfluous man, freedom may mean freedom to starve and is pretty certain to mean freedom to be relatively unprosperous.

Any industrial condition in which one man is indispensable and another superfluous is necessarily an un-

¹ Harvard University Press, 1915. Cf. Chap. x.

balanced condition. No man is indispensable if there are plenty of others who can do the same kind of work which he does. No man is superfluous unless there are more than are needed to do the kind of work which he can do. A situation in which no class of men was so small as to make any one indispensable, and no class so large as to make any one superfluous would be a better balanced situation. One in which all were about equally needed would be perfectly balanced.

Even in an unbalanced situation, while the individual in a large class may be superfluous, the class as a whole is indispensable. There may, for example, be so many ditch diggers as to make any individual among them superfluous, nevertheless, ditch diggers as a class may be indispensable. The superfluous individual, bargaining alone, is weak and can never, so long as he is superfluous, bargain to his own advantage. The indispensable class, if it can bargain as a unit, can take advantage of its indispensability and bargain to its own advantage. Therein lies the philosophy of the collective bargaining program.

Its reason for existence is found, however, in an unbalanced industrial system. A kind of labor which is scarce enough to make each individual laborer practically indispensable would not need collective bargaining. Individual bargaining would give them their full share in the general prosperity. To use collective bargaining to add still more to that prosperity would not be a means of defense but a means of extortion. It would not differ in any essential particular from the trust, and the public would soon become as impatient of collective bargaining on its part as it has already become of collective bargaining on the part of the trust.

Where the lack of balance among the factors of production is not so very extreme, that is, where there is no

great overabundance of one factor and no great scarcity of another, collective bargaining on the part of those who sell the overabundant factor is a sufficient remedy. That happens to be the situation in the United States with respect to most forms of skilled manual labor. Skilled laborers are not so numerous as to place them at any great disadvantage in the bargaining process. Such disadvantage as they suffer can generally be overcome by the simple process of collective bargaining. They are not strongly tempted to adopt either the voting or the fighting program; first, because they have no such grievance as would justify their surrender of individual freedom; second, they are not numerous enough to give them much voting or fighting power.

III. THE VOTING PROGRAM

Generally speaking, the more numerous any industrial class happens to be, the weaker its members are in the process of bargaining on the free and open market. But the numbers which make them weak in bargaining make them strong in voting. On the market they are at a disadvantage; in politics they are at an advantage. The greater their weakness on the market, the greater their voting strength in politics.

As stated above, where the disproportion of numbers is not so very great, the disadvantage in bargaining is likewise not so very great, neither is their voting strength so very great. Under such circumstances, the voting program does not seem to be necessary, nor does it promise much success. Collective bargaining is the only logical program. But where the disproportion is very great, the voting program seems to be more of a necessity and, what is more to the point, it promises greater success.

In a community where any class of wage workers, say unskilled laborers, outnumber all other people, the oversupply of unskilled workers will make their position on the labor market very difficult. Even collective bargaining has its limits, mainly because of the difficulty of keeping so large a mass together in order to bargain as a unit. But since they outnumber all others, their voting strength is overwhelming if they can be induced to vote as a unit. They could easily control the state, elect the entire personnel of government and use the compulsory power of the government to gain their own ends. As a matter of fact, they would not even have to take the initiative. Candidates for the salaries and emoluments of public office would certainly appreciate their opportunities. They would seek the votes of this class which had so many votes to give by offering it everything it wanted, even more than it had the courage to ask for. The voting program is therefore almost a certainty in any community where the disproportion of occupational classes is very great.

This will explain why the dominant elements in American Trade Unionism have always stood for a collective bargaining rather than for a voting program. They have not needed to control the state in order to gain fairly good wages for themselves, and, moreover, they have not had votes enough to control the state even if they had wanted to. It will also explain why English laborers have adopted a voting program. The disproportion between wage workers and other factors of production or other elements in the population is much greater there than here. In bargaining, English laborers are therefore weaker, and in voting stronger than American laborers as a class. English laborers therefore have greater need of the help of the state, and greater power to gain control of the state than have American la-

borers. The sheer logic of this situation calls for a greater trend toward socialism there than here.

Other classes besides laborers have shown the same tendency to use the state to help them out of a situation in which their bargaining power was reduced. In the seventies and eighties of the last century there was a disproportionate production of agricultural crops in this country. The rapid settlement of the rich prairies of the West had poured a flood of agricultural products upon the markets of the world. This put the farmers at a disadvantage on the free and open market. Their numbers proved to be their weakness on the market, but their strength at the polls. They were not slow to realize the situation and to use their voting strength rather than their weakness. Even if they had been slow to realize it, they were abundantly reminded by a swarm of candidates for office who had uses for the large farmer vote. Since 1909, the farmers have not been so numerous relatively to the rest of the population as to place them at a great disadvantage on the market, nor to give them a great advantage at the polls. Consequently they are not now demanding so much help from the government. In fact, the demand for price-fixing and similar government interference has not come recently from the farmer but from the urban consumers. At the same time, the candidates for office have, except in the far Northwest, almost forsaken the farmer and have become very solicitous of the labor vote.

There was also a time when the manufacturers, especially those starting new lines of manufacturing, felt weak on the market, or thought that they did when brought into competition with old and well established rivals across the water. They then turned to the state for help. They were able to deliver considerable numbers of votes. The result was that candidates for office became solicitous as to the welfare of infant industries.

In England, after the Black Death, when labor was scarce and hard to find, laborers were strong in bargaining but weak in voting because they had no votes. The employing classes were temporarily weak in bargaining but strong in voting, since they did whatever voting was done. At any rate they controlled the state. They were not slow to use the state to help themselves in the bargaining process.

In view of all these experiences, it is pretty certain that any class which finds itself so numerous as to be weak in bargaining and strong in voting will make use of a voting program. It is not so certain, judging by past and present experience, that it will use its voting power wisely. In fact, no case has yet appeared where a voting program adopted under such conditions was not destructive rather than constructive, which was not demagogic rather than economic, which did not consist in killing the goose that laid golden eggs in order to seize the whole stock, rather than in increasing the flock. But that is not the important certainty. The important certainty is that wherever and whenever such an unbalanced condition is allowed to arise as that which exists in England today, a voting program similar to that which has been paraded in this country as the program of the British Labor Party is certain to be adopted. Tho it lacks a single constructive feature, tho it is made up exclusively of scraps of Marxian jargon, catch phrases, and shibboleths, nevertheless, it is the kind of a program which any class is likely to adopt in its own interest when it for the first time concludes that it can outvote other classes and control the state.

IV. THE FIGHTING PROGRAM

It is sometimes affirmed that the labor program of the British laborers is more "advanced" than that of the American laborers. By the same token the program of the Russian laborers is more "advanced" than that of the British. The disproportion of the wage workers to other urban classes is also greater in Russia than in England, as it is in England than in the United States. That is to say, there are fewer technicians, business men, capitalists and smaller accumulations of productive capital, and fewer productive establishments calling for men in proportion to the number of men available to man them. This disproportion puts the Russian laborers, particularly the great mass of ignorant and unskilled laborers, at a still greater disadvantage in bargaining, but gives them vastly greater strength in other ways.

Numbers give strength not only in voting but also in fighting. Fighting, provided victory is certain and overwhelming, is a shorter cut to what is wanted than voting. To be sure, it may, like other short cuts, not work well in the long run, but it looks like a quicker method of getting possession of accumulated wealth than the voting program, as the voting program is quicker than the program of industry, thrift, and sound investing.

Where the numerical strength of the wage workers is not overwhelming, fighting may prove expensive even tho ultimate success looks pretty certain. Voting looks like a cheaper program than killing. But where numerical strength is so overwhelming as to make victory in fighting not only certain, but cheap because of the absence of power of effective resistance on the part of other classes, the fighting program is pretty certain to be adopted.

It is useless to point out to a great mass of ignorant and unskilled labor that even tho they have the power to take possession, with very little fighting, of the accumulated wealth of the country, still they would better not do it because, in the long run, they will lose more than they will gain by it. If they were capable of appreciating such arguments, they would not be ignorant and unskilled laborers. Men are not ignorant and unskilled laborers in industry and at the same time farsighted statesmen in politics. They are just as ignorant and short-sighted with respect to public as with respect to private affairs.

Therefore we may conclude that whenever and wherever a nation becomes so unbalanced occupationally as Russia is, the fighting program is certain to be the dominant labor program. In short, we in this country can have any one of these four programs which we choose to have. If we balance things up, none of the other programs will become dominant or dangerous. If things become slightly unbalanced, some kind of a collective bargaining program is certain to grow out of the situation. If they become somewhat more unbalanced, a voting program is certain to become the dominant program supported by the numerically superior class, whose numerical superiority makes it weak on the market but strong at the polls. If they become still more unbalanced, the numerically superior class, finding itself hopelessly weak on the market, but overwhelmingly strong in the use of physical force, will use its strength to take what it wants.

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NOTES AND MEMORANDA

INTERNATIONAL TRADE AND PRICES

In the Quarterly Journal of Economics for February, 1918, Professor Wicksell has a note on price levels and international trade which suggests certain comments. Professor Wicksell approaches the problem throughout "from the goods end" so to speak; that is to say, he regards the movement of goods and not the movement of gold as the primarily effective factor in the changes in price levels produced by changes in international trade. Tho of course the movement of goods is the ultimate thing in all kinds of trade, yet it appears to me that Professor Wicksell underestimates the active influence of the money factor and that in consequence his account often does not represent fully the actual course of events.

Professor Wicksell's note contains two parts. The first deals with the effect of borrowing transactions between countries. Assume two countries under a free trade régime with only a land boundary between them, both having a gold currency. One borrows from the other. The result according to Professor Wicksell is increased "power of purchase" in the borrowing country and decreased power of purchase in the lending country, increased imports to the former and decreased imports to the latter, but no change in price levels. But the increased quantity of goods "will require a greater quantity of money to put it in motion" and a certain amount of gold will "pass automatically" to the borrower. This transmission of gold will appear at the beginning of the period of borrowing and then stop and its effect will be not to raise prices in the borrowing country but only, by maintaining the proportion between goods and money in the two countries, to keep prices

up to the old level in the borrowing country and down to the old level in the lending country.

It appears to me that the exact effect of the borrowing transaction will depend on the form in which the loan is taken. Suppose the borrowing country chooses to take the loan in the form of money — then the supply of bills drawn on the lending country, or the demand for bills on the borrowing country will increase, exchange will move in favor of the borrowing country, and if it moves beyond the gold point, gold will flow in and all prices and money incomes will rise. This rise will increase the country's effective demand for imports—which will not have risen in price — and they will increase. Ultimately of course, the gold will flow out again to pay for the increased imports and the old price level will be restored. This process involves a movement of gold and a change in price levels before the movement of goods takes place at all.

Suppose, however, that the borrowing country takes the loan in the form of goods — that is to say, suppose it spends the borrowed money in the lending country. Then the quantity of goods it imports will increase. This is evidently the case contemplated by Professor Wicksell. The imports of the lending country will have decreased relatively to the imports of the borrowing country. Whether they will have decreased absolutely depends on whether the loan represents a transference of demand from imported commodities to domestic commodities or not. In other words, it depends on whether the money, if it had not been lent to the borrowing country which, by hypothesis, spends it on the products of the lending country, would have been spent on imported goods or on goods produced at home. If it would have been spent on goods produced at home anyway, the fact that it is lent to a foreign country will obviously make no difference to the quantity of goods imported by the lending country. Whether the demand will in fact be transferred from imports to domestic commodities depends on the marginal utilities of imported and domestic goods to the savers who provide the loan. If in response to the demand for a loan they increase their saving they will obviously curtail their consumption of

those things whose marginal utility is lowest to them. If, however, the loan is created by an inflation of bank credit and does not represent real saving, there will be no transference of demand, and the lending country's imports will not be affected anyway — at least so far as the short period is concerned. In any case, however, the quantity of goods relative to the quantity of money will be increased in the borrowing country and decreased in the lending country; general prices will fall in the one and rise in the other. Eventually, but only, as Professor Taussig points out,¹ over a long period and not "automatically . . . at the very beginning of the borrowing period," gold will flow to the borrowing country and the relation between the price levels of the two countries be readjusted; in the intervening period, however, price levels will have been affected.

To consider the application of this analysis to two practical cases — the rise in the level of Indian prices during the period 1903-07 is attributed, among a number of other causes, to the large borrowings of foreign capital which were made during those years.² It is evident that whether the influx of capital had the immediate effect of raising prices or not depends on whether the loans took the first or the second of the two forms described above. In the first case, an influx of capital would immediately produce a rise in general prices; in the second case it would produce an immediate fall (or a check to an existing rise) and a compensatory rise later. Again in the case of a loan raised in America by England during the war, the second case is probably the actual one. If this is so, we should expect a check to the rise of prices in England and an increased rise in America. Thus the absence of that fall in the American price level which Professor Wicksell expects theoretically to result from the borrowing transaction may be due to other causes besides the alleged world depreciation of gold.³

The second part of Professor Wicksell's note is concerned with the effect of borrowing on international trade through

¹ Quarterly Journal of Economics, February, 1918, p. 411.

² J. H. Keynes, "Recent Economic Events in India," Economic Journal, 1909, p. 51.

³ Cf. Quarterly Journal of Economics, February, 1918, p. 409.

its effect on costs of transport in the case of two countries separated from each other by sea. If America borrows from England, then, he says, freight rates to America will rise (because of the increased quantity of goods to be carried) while freight rates from America will fall. Then the prices of "both imported and exported goods will have a tendency to rise in America and to fall in England" and "consequently the general level of prices will have been raised in America and lowered in England."

In this statement it does not seem clear in what connection the words "rise and fall" are used. Prices will rise or fall relatively to what? — Relatively to prices of the same things in the other country at the same time, or relatively to prices of the same things in the same country at a previous time? Evidently what will actually happen is this. Suppose A is the borrowing and B the lending country. Prices of imports to A will rise relatively to the prices of the same things in B at that time and relatively to the prices of the same things in A before that time — i.e., before the borrowing process began; on the other hand, the prices of goods exported will rise in A relatively to their price in B at the same time but not relatively to their price in A before the process started. The general level of prices in A will not so far be affected because it can only be affected by a change in the quantity of money or in the quantity of goods exchanged. Similarly the price of B's imports will fall relatively to their price in A and to their price in B before but the price of exports will only fall relatively to their price in A. The general level of prices will not be affected. What is important in this is the rise in the price of A's imports relatively to what they were before and the fall in the price of B's imports relatively to what they were before. This rise and fall will affect demand in A and B. The exact result on the general level of prices in the two countries will depend on the elasticities of their respective demands. If, for instance, A's demand for B's goods has an elasticity greater than unity while B's demand for A's goods has an elasticity equal to or greater than unity, the aggregate value of A's exports will exceed the aggregate value of her imports,

gold will flow to A and the general level of prices there will rise. If, on the other hand, the elasticity of A's demand is less than one while the elasticity of B's demand is equal to or less than one, the aggregate value of A's imports will exceed the aggregate value of her exports, gold will flow to B and the general level of prices there will rise. This rise or fall in A's prices will be proximately the result of gold movements and there will not be first a rise in A's price level and then an influx of gold to support that rise.¹ In fact, as Dr. Fisher says "so far from its being true that high prices cause increased supply of money, it is true that money avoids the place and time of high prices and seeks the place and time of low prices, thereby mitigating the inequality of price levels."²

The effect of issuing more convertible bank notes in the borrowing country would be nil if the issue was completely covered by gold, since it would presumably be accompanied by the withdrawal of an equivalent amount of the precious metal. An issue of partially or wholly inconvertible notes would raise the price level and tend, by increasing the country's effective demand, to alter the effect of the rise in import prices, aggravating it if the elasticity of the borrowing country's demand for imports were less than unity, and counteracting it if the elasticity were greater than unity. The English price level has risen during the war owing, in part at any rate, to the overissue of treasury notes and the inflation of bank credit. It appears probable in view of the extreme urgency of the need for war material that the English demand for American goods is very highly inelastic, probably it has an elasticity less than unity. In this case the rise in the price level will aggravate the existing effect of a rise in import prices and the aggregate value of English imports will be larger than if either of these monetary phenomena did not exist.

The American demand for English goods must be much more elastic, probably it is greater than unity. If this is so, the short period effect of borrowing by England in America

¹ *Quarterly Journal of Economics*, p. 408.

² *Fisher, Purchasing Power of Money*, p. 173.

will be to make the aggregate value of both their imports greater than before. Which will be the greater of the two depends on the exact relation between these elasticities, a relation which could only be determined by detailed statistical study.

We have seen that the overissue of treasury notes and the inflation of bank credit would tend to increase the aggregate value of English imports. If we assume that the effect of borrowing operations has been such as to increase the aggregate value of American imports less, or only slightly more than the increase in English imports due to the same cause, then the inflation of English currency by aggravating the effect of the borrowing transaction on English imports would tend to make these much larger than American imports and so cause an outflow of gold and a fall in the English price level. But under the actual circumstances this inflation may also have a different and contradictory effect on the price level. Disregarding for the moment the complications resulting from borrowing transactions, suppose there had been no inflation. If the English price level had then been lower than the world level gold would have flowed in and pushed English prices up. But if local non-monetary causes of a high price level had been such as to make the English level higher than the world level, then gold would flow out of England. In this last case the existing restrictions on gold export, the incomplete convertibility of treasury notes and the continuous and rapid inflation of credit would be responsible for a very large part of the rise in English prices, for the continuous issue of fresh paper and bank money would counteract, or more than counteract the effect of any such outflow of gold as might occur in spite of the prohibition.

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